A STUDY ON SOCIO-ECONOMIC STATUS OF ETHIOPIAN ATHLETES, THEIR PERFORMANCE AND CONTRIBUTION TO ECONOMIC GROWTH

RESEARCH SYNOPSIS
SUBMITTED TO MANGALORE UNIVERSITY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN PHYSICAL EDUCATION

RESEARCH SCHOLAR

MASSRESHA ERAGO GEBREGIORGIS
REG. NO. 181131204

GUIDE
PROF. KISHORE KUMAR C.K.

DEPARTMENT OF PG STUDIES AND RESEARCH IN PHYSICAL EDUCATION AND SPORTS

MANGALORE UNIVERSITY 574199

JULY 2022

MANGALORE - INDIA

ACKNOWLEDGEMENT

First and foremost, my admiration and thanks to the Almighty of God for his blessings throughout my life and for completing the research successfully.

I would like to express my honest gratitude to my home country, the Ethiopian Ministry of Education and Dilla University, for giving me this chance in India.

I would like to express my deep and sincere gratitude to my research Guide, Dr Kishore Kumar C.K., the head of the registrar of Mangalore University, for allowing me to make this research proposal and providing invaluable guidance throughout this research. His dynamism, vision, sincerity and motivation have deeply inspired me. Working and studying under his guidance is a great privilege and honor. I am extending my extremely heartfelt thanks to my wife, Aynalem Zewidie, for her acceptance to live with me in India to help me, her patience, her love, understanding, prayer, and continuing support to complete this research work. Finally, my thanks go to all the people who have supported me in completing this research proposal directly or indirectly.

Finally, I would like to thank: Directly and indirectly, my study participants; without them, this research would never have been finalized. During the study time, your co-operation, strength, courage and daily willingness inspired me and made all the difficulties in this study worthwhile.

- *I would like to express my deep and sincere gratitude to Dr Gerald D. Sousa, the head of the sports science department and director of the education department, for his time, continual professional and administrative support and consultation.*
- *I would like to express my deep gratitude to 2020-Tokyo Olympic team coaches and athletes, Commander Toliera Dinka, Tola Debelie, Athlete Tirunesh Dibaba National Athletics Training Centre coaches, Oromia Rural Road Construction Authority Athletics Club head coach Diriba Legesse, Ethiopian sport commission officials, Addis Ababa city sports commission, Ethiopian athletics federation for allowing the study and assisting me in the beginning and finishing this study.*
- *I am extending my extremely heartfelt thanks to my parents, brothers and sisters for their continuous moral support throughout my academic career.*
- *I am extending my extremely heartfelt thanks to my friends, Zeynu Urgessa and Efrem Zeleke, for their consistent moral and professional support.*

CERTIFICATE

***THIS CERTIFY TO MASSRESHA ERAGO GEBREGIORGIS THAT THE THESIS ENTITLED WITH A STUDY ON SOCIO-ECONOMIC STATUS OF ETHIOPIAN ATHLETES, THEIR PERFORMANCE AND CONTRIBUTION TO ECONOMIC GROWTH IS HIS ORIGINAL RESEARCH WORK CARRIED OUT BY HIM SINCE SEPTEMBER 2018 TO 2022 FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY (PHD.) IN PHYSICAL EDUCATION IN THE DEPARTMENT OF PG STUDIES* **AND RESEARCH IN PHYSICAL EDUCATION AND SPORTS** *IN MANGALORE UNIVERSITY. I FURTHER CERTIFY THAT THE THESIS HAS NOT FORMED THE BASIS FOR THE AWARD PREVIOUSLY OF ANY DEGREE OR FELLOWSHIP AND ANY OTHER SIMILAR TITLE.*

DATE 15/07/22
PLACE MANGALORE ***SIGNATURE OF THE GUIDE***
MANGALA GANGOTRI

PROFESSOR KISHORE KUMAR C.K.

DECLARATION

I, Mr Massresha Erago Gebregiorgis, declare as follows:

The work described in this thesis has not been submitted to Mangalore University or other tertiary institutions to obtain an academic qualification, whether by myself or any other party. That my contribution to the research was: Principal investigator for all studies - developed proposal, conducted all testing, organized and interpreted all data, as well as wrote the whole thesis.

That the contributions of others to the project were as follows:

Associate Professor Kishore Kumar C.K.:- Primary supervisor for all studies and Professional statistician.

Signed _____ Date July 18, 2022

Table of Contents

ACKNOWLEDGEMENT I

CERTIFICATE II

DECLARATION III

1. ABSTRACT 1

2. INTRODUCTION 3
   2.1. THE STATEMENT OF PROBLEM 4
   2.2. HYPOTHESIS OF THE STUDY 4
   2.3. OBJECTIVES 6
      2.3.1. GENERAL OBJECTIVES 6
      2.3.2. SPECIFIC OBJECTIVES 6
   2.4. SIGNIFICANCE OF THE RESEARCH 7
   2.5. DELIMITATION OF THE STUDY 7
   2.6. LIMITATION OF THE STUDY 8
   2.7. ORGANIZATIONAL STRUCTURE OF THE INVESTIGATION 8

3. REVIEW OF RELATED LITERATURE 9
   3.1. BRIEF REVIEW OF LITERATURE 9
   3.2. ACHIEVEMENT MOTIVATION 11
   3.3. INERTIAL TENDENCIES' POSTULATE IMPLEMENTATION 12

4. RESEARCH METHODOLOGY 13
   4.1. RESEARCH DESIGN 13
   4.2. RESEARCH METHOD 13
   4.3. SAMPLE SIZE AND POPULATION 14
   4.4. DATA COLLECTION METHOD & INSTRUMENT 14

5. ASSESSMENT OF SOCIO-ECONOMIC STATUS AND RUNNING PERFORMANCE OF ETHIOPIAN LONG AND MIDDLE-DISTANCE RUNNERS` 14
   5.1. OBJECTIVE 14
   5.2. RESEARCH METHOD 14
   5.3. RESULT AND DISCUSSION 15
      5.3.1. Result 15
   5.4. DISCUSSION 25
   5.5. CONCLUSION 27

6. SOCIOLOGICAL, PSYCHOLOGICAL AND ECONOMIC 28
   6.1. OBJECTIVE 28
   6.2. MATERIALS AND METHOD 28
      6.2.1. RESEARCH DESIGN 28
      6.2.2. SAMPLING TECHNIQUES, DATA COLLECTION METHOD AND POPULATION 28
   6.3. RESULT 28
      6.3.1. DESCRIPTIVE STATISTICS 30
      6.3.2. HYPOTHESIS TEST SUMMARY 31
   6.4. DISCUSSION 34

6.4.1. ETHIOPIAN ATHLETES` STRONG DESIRE 34
6.4.2. LOW SOCIOECONOMIC STATUS EFFECTS ON PERFORMANCE 34
6.4.3. ECONOMIC PROBLEM AND MOTIVATION 35
6.4.4. ETHIOPIAN ATHLETES JOIN FORMAL TRAINING 35
6.4.5. SIGNIFICANCE OF ECONOMIC CHANGE IN ATHLETES AND THEIR FAMILIES` LIFE 35
6.4.6. THE ROLE MODEL EFFECTS ON ATHLETES' PERFORMANCE 36
6.4.7. MOTIVATIONAL FACTORS 36
6.5. CONCLUSION 37

7. ETHIOPIAN ATHLETES` SUCCESS WITH ALTITUDINAL VARIATIONS, ATHLETES DISTRIBUTION, AND REGIONAL STATES CONTRIBUTION TO ATHLETES' PRODUCTION 38
7.1. OBJECTIVES 38
7.2. MATERIAL AND METHOD 38
7.3. ORGANIZATION 39
7.3.2. ALTITUDE OF SAME SAMPLE AREA OF ETHIOPIAN ATHLETES 40
7.3.3. LOCATION OF AMHARA REGIONAL STATE IN ETHIOPIA 41
7.3.4. LOCATION OF OROMIA REGIONAL STATE IN ETHIOPIA 42
7.3.5. LOCATION OF SNNP REGIONAL STATE IN ETHIOPIA 43
7.3.6. LOCATION OF ADDIS ABABA CITY ADMINISTRATION 44
7.3.7. TIGRAY REGIONAL STATE 45
7.3.8. BENISHANGUL GUMUZ REGIONAL STATE 45
7.3.9. THE CURRENT ETHIOPIAN ATHLETES' LOCATIONAL DATA 46
7.3.10. ETHIOPIAN ATHLETES' OLYMPIC SUCCESS, COMPETITION AREA ALTITUDE AND BIRTH PLACE ALTITUDE 49
7.3.11. ETHIOPIAN OLYMPIC MEDALIST TRAINING AND LIVING PLACE LOCATION 51
7.4. RESULT AND DISCUSSION 52
7.4.1. RESULT 52
7.4.2. CONCLUSION 53

8. ETHIOPIAN ATHLETES' CONTRIBUTION ON ECONOMIC GROWTH 56
8.1. OBJECTIVE 56
8.1.1. ITEMS AND CODES 57
8.2. RESEARCH DESIGN 57
8.3. RESEARCH METHOD 58
8.4. RESULT AND DISCUSSION 58
8.4.1. DESCRIPTIVE STATISTIC 1 59
8.4.2. DESCRIPTIVE STATISTIC 2 59
8.4.3. TEST STATISTICS 1 60
8.4.4. TEST STATISTICS 2 62
8.5. QUALITATIVE DATA SUMMARY OF ATHLETES' CONTRIBUTION TO ECONOMIC GROWTH 64
8.6. DISCUSSION 65
8.7. CONCLUSIONS 66
8.7.1. INVESTMENT PARTICIPATION AND CONTRIBUTION 66
8.7.2. THE SOURCE OF INITIAL CAPITAL 67

8.7.3. ATHLETES' AND FAMILIES ECONOMIC CHANGE 67
8.7.4. ETHIOPIAN ECONOMIC CHANGE 68
8.7.5. REWARD TAXES AND SPORT OFFICES BENEFITS 68
9. CONCLUSION AND RECOMMENDATION 69
9.1. CONCLUSION 69
9.2. RECOMMENDATION 71
BIBLIOGRAPHY 76

1. ABSTRACT

The success and dominance of Ethiopian long and middle-distance runners are undeniable; the question is why they are so successful and dominant. Different study outcomes suggest that the dominance of Ethiopian athletes in long and middle-distance running is attributable to altitude, ethnicity, physiological condition, and environment. However, the actuality contradicted the previous assumption. This study investigates Ethiopian athletes' socioeconomic status, performance, and contribution to economic growth. The specific objectives of the study are to examine the relationships between the socioeconomic status of Ethiopian athletes and their running performance; the success of Ethiopian athletes in terms of motivation to achieve economic success; athletes' training and living altitudes; the determinants of Ethiopian athletes' success in world long and middle-distance running; the current distribution of Ethiopian athletes' altitude, and Ethiopian athletes' success. The study used mixed methods research designs and convergent Parallel research methods derived from the mixed design. The researcher used a questionnaire to collect the necessary data from both primary and secondary data sources. The study used a purposive sampling technique to select the sample because the research purposely focused on Ethiopian middle and long-distance runners. The total target sample of the study was 459, and among those were 326 athletes, 83 coaches, referees, sports professionals, and 50 athletes' investment personnel. The researcher developed and adapted the performance level frame of references for Ethiopian athletes and adapted BG. Prasad socioeconomic status measurement scale to measure Ethiopian athletes` SES. This study`s results indicated that low socioeconomic status athletes observed a high running performance, and the highest socioeconomic status athletes had low performance and participation in long and middle-distance running. The 83 Ethiopian athletes who participated in this study were high-level performers worldwide and in Ethiopia, including Olympic gold medalists, but they came from lower socioeconomic backgrounds. ELMD runners faced an economic problem when they joined long distance-training. ELMD runners joined formal running training with low socioeconomic status. The study result indicated that Ethiopian athletes` success was through confronting economic challenges, not only through training effects. The study concluded that Ethiopian athletes` performance and socioeconomic status are inversely correlated. The demographic distribution-related question was forwarded to a 326-sample population of Ethiopian athletes. The total of 326 sample locations indicated that the current Ethiopian

athletes' distribution based on altitude was different, and almost eight regional state athletes participated in this study. The current Ethiopian athletes are not all of the same ethnic group, and there is no majority group in any area or regional state in Ethiopia. Almost all Olympic competitions have been held at low altitudes between 11 and 520 m. above sea level, except Mexico Olympics. All the Ethiopian Olympic winners' athletes came from high-altitude areas, and all competitions were on low land. Their training at high altitudes has given them more chances to win long-distance running than other throwing and jumping events. The study's final results related to the determinants of Ethiopian long and middle-distance runners' success: training altitude, role model Effect, Motivation to overcome economic problems (athletics as a livelihood strategy to get out of poverty), the athletes` motivation to alleviate their economic problems and other comparative advantages such as altitudes that living and training at high altitude helped Ethiopian athletes to be successful in the world long and middle distance running. The current performance of Ethiopian athletes in athletics sports has been tested to prove by this research work that it is the personal effort of the athletes, not the help of modern training and infrastructure. It is believed that if Ethiopian athletics had been aided by modern training and infrastructure and the current beginnings were applied; the Ethiopian economy would have been better supported by athletic sport. This study investigated Ethiopian athletes` contributions to Ethiopian economic growth, considering the role of sports plays within society. The study's focus was to assess athletics sports and athletes' contributions to Ethiopian economic growth with a critical investigation of athletes 'investment sectors, the sources of their initial capital, their participation in economic sectors, their role in decreasing the unemployment rate, and foreign currency problem, and other related issues. Ethiopian athletes have been participating in different investment sectors in Ethiopia and contributing to Ethiopian economic growth. Currently, Ethiopian athletes` capital is more than 2% of the current GDP of Ethiopia that more than $ 2 billion in registered capital and

more than 8539 employees were employed in their investments, and more than 20,000 workers and businesses man working in athletes' investment sectors by creating their own business, more than 40,000 members of the society directly beneficial to athletes' business sectors. The initial capital of Ethiopian athletes' investment was the reward of athletics sport. Ethiopian athletes` main investment sectors were hotels and lodges, agriculture, industry, tourism, service, and import and export.

2. INTRODUCTION

Thanks to the modern Olympics promoting Ethiopia on the international stage and bolstering the country's economy through long-distance running. During this time, athletics has become a significant source of income and business for athletes and a driver of economic growth in the nation. Olympic sport not only introduces Ethiopians to the rest of the world, but the country's economy is also heavily aided by athletic sports. Citizens are helping themselves, their families, and their country's economy with the money they earn competing on the world stage.

Although Ethiopia is at the pinnacle of long- and medium-distance racing on the international stage, it is ranked the highest in the world. The results to date have been attributable to the athletes' personal efforts rather than modern training and infrastructure. This research demonstrates that the current performance of Ethiopian athletes in athletics is due to the athletes' efforts and not to modern training and infrastructure.

Ethiopia's participation in Olympic sports began with the 1956 Olympics. Long-distance runners from Ethiopia have dominated long-distance, and middle-distance competitions held on different continents and under varying weather conditions. Most of the world's long-distance running results are controlled by the east African nations of Ethiopia and Kenya, also known as the Arisi and Kalenjin tribes (Onywera et al., 2006; Hamilton, 2000; Dr.S.Jayaraman, 2016; Wilber & Ptsiladis, 2012; Scott et al., 2003). The current study's findings and distribution of Ethiopian athletes from more than eight regional states of Ethiopia are presented in a table and graph as part of the data organization. According to the findings of this study, Ethiopian athletes did not originate from a single geographical location or elevation. Since 1960, Ethiopian athletes have won 58 Olympic medals, of which 23 were gold, 12 were silver, and 23 were bronze.

The European runners' loss of supremacy is not due to a decline in their running speed. The truth is that African runners are currently running faster. Ethiopian and Kenyan middle- and long-distance runners hold more than ninety percent of all world records and the top ten international rankings for middle- and long-distance running. What factors contribute to African runners, primarily Ethiopians and Kenyans, becoming the best in the world? In general, athletic performance requires the integration of numerous factors (de Lira et al., 2014a). One of the factors is the athletes' socioeconomic status or family background.

2.1. THE STATEMENT OF PROBLEM

The altitude in East Africa has made athletes a natural choice. There is no need for advanced coaching techniques or technological infrastructure. East African athletes have access to the global stage, resulting in a handful of elite athletes who inspire tremendous national pride and are respected internationally (Bob Davis, 2000).

Ethiopian and Kenyan runners are descendants of the Kalenjin and Arsi tribes, as demonstrated by the preceding descriptions of the world's long-distance running results. The majority of Ethiopian long-distance runners have resided and grown up in Arisi. Arisi is the birthplace of many elite and renowned long-distance runners in Ethiopia and worldwide.

Since the first victory of an Ethiopian athlete who competed in the 1960 Olympic Games in Rome, Ethiopian and Kenyan runners have dominated the world's long-distance running results. The majority of Ethiopian long-distance runners resided and were raised in Arsi. Arsi is the birthplace of numerous elite and renowned long-distance runners in Ethiopia and worldwide. Arsi Zone is located in the Oromiya regional state, and its population is less than five percent of the Oromiya regional state's total population; therefore, the population's socioeconomic status is classified as low. (Dr.S.Jayaraman, 2016). Based on this, almost all athletes who grew up in the Arsi Zone have low socioeconomic status, and athletics, particularly long- and middle-distance running, has served as an alternative source of income for the community since the time of the first role models, Derartu Tulu and HileGebresilasie.

Ethiopian long-distance and middle-distance runners have been dominating long and middle-distance running worldwide and receiving the largest rewards of materials and dollars. They have been attempting to change their lifestyle. However, it was questionable to what extent the athletes in Ethiopia are changing their life through long and middle-distance running and to what extent the government has given much more attention to this business sector. In light of the perspectives mentioned above, the researcher would forward the following hypothesis; these have been tested and answered during the research.

2.2. HYPOTHESIS OF THE STUDY

2.2.1. It was hypothesized that the socioeconomic status of Ethiopian athletes influences their athletic performance. This study's theoretical framework includes variables known as

dependent and independent variables. The dependent variable of this hypothesis is performance. In contrast, the independent variable is an athlete's socioeconomic status, which is divided into three categories: high, medium, and low. The researchers extensively studied the socioeconomic impact on an athlete's performance. More closely related to an athlete's socioeconomic status is their performance. This indicates that an athlete's performance may be high, low, or average, depending on their socioeconomic status.

2.2.2. It was hypothesized that the Ethiopian middle-distance and long-distance runners' desire for economic success enhanced their athletic performance. In this case, the study's dependent variable is athletics performance, and the independent variable is athletes' motivation to pursue economic success; this independent variable of athletes' motivation to pursue economic success affects or influences the athletes' performance. In what measure would it be true? We observed it in the conclusion of the hypothesis test.

2.2.3. It was hypothesized that participation in international competition would improve their economic status. Based on this hypothetical statement, international participation and economic performance are the variables. To clarify, Ethiopian athletes who have participated in international competitions are regarded as the independent variable, while their economic performance is the dependent variable. Ethiopian athletes who compete in various International long and middle-distance running competitions are incentivized to improve their economic performance. This is because most Ethiopian athletes who participate in international competitions have outstanding athletic abilities and are rewarded with high-level rankings and incentives that alter their economic performance. International participation improves the income of athletes.

2.2.4. In relation to the economic growth contribution of Ethiopian athletes, it was hypothesized that their participation in international athletics competitions would increase their economic growth contribution. This study's dependent variable is Ethiopian athletes' contribution to the country's economic growth, while the independent variable is Ethiopian athletes' participation in international competitions. This may have a positive correlation between the dependent and independent variables. This hypothesis relates to the initial hypothesis regarding international participation and economic performance.

2.2.5. The current socioeconomic status of Ethiopian long- and middle-distance runners, as well as the socioeconomic status of their families, is altered by their participation in international championships. This hypothesis relates to athletes' rewards for participating in various international athletics competitions. The dependent variable in this instance is international athletics participation and reward, while the independent variable is the socioeconomic status of Ethiopian athletes and their families.

2.2.6. Ethiopian long- and middle-distance runners' participation in international athletics competitions increased, as did their income, and so did their investment participation in the agricultural, industrial, manufacturing, and service sectors.

2.3. OBJECTIVES

2.3.1. GENERAL OBJECTIVES

This study's overall objective was to investigate Ethiopian athletes' socio-economic status, performance, and contribution to economic growth.

2.3.2. SPECIFIC OBJECTIVES

The specific objectives of this study depended on the overall objectives of the study on the socioeconomic status of Ethiopian athletes, their performance, and their contribution to economic growth, with a focus on the socioeconomic status assessment of Ethiopian long- and middle-distance runners. On this basis, the study's specific objectives will be able to

- ❖ evaluate the socioeconomic status and running performance of Ethiopian long and middle-distance runners.
- ❖ Examine the relationship between socioeconomic status and running performance of Ethiopian middle and long-distance runners.
- ❖ Investigate psychological, sociological, and economic determinants of the success of Ethiopian runners.
- ❖ Evaluate the contribution of long and middle-distance runners to the economic growth of Ethiopia.
- ❖ Examine the success of Ethiopian athletes in relation to altitude, athlete distribution, and the contribution of regional states to athlete production.

- ❖ Examine the investment sectors of Ethiopian athletes and the contribution of their investment sectors to society.
- ❖ Show the primary potential of Ethiopian middle-distance and long-distance runners.
- ❖ Determine the obstacles and opportunities facing Ethiopian middle and long-distance runners and use as the reference frame for other investigators.

2.4. SIGNIFICANCE OF THE RESEARCH

In the study on the socioeconomic status of Ethiopian athletes, their performance and contribution to economic growth have various implications for the country, the government, the society, the athletes and their employees, coaches, and other interested parties, some of the significances are: -

- ❖ To demonstrate the current socioeconomic status of Ethiopian middle-distance and long-distance runners and their families.
- ❖ To promote the contribution of middle and long-distance runners from Ethiopia to the country's economic growth.
- ❖ To rectify the widespread misinterpretation of research concerning the relationship between socioeconomic status and running performance among Ethiopian distance runners.
- ❖ To demonstrate the greater investment participation of Ethiopian long- and middle-distance runners compared to Ethiopia's current GDP.
- ❖ Promote the region that produces long- and middle-distance runners.
- ❖ To advise the Ethiopian Athletics Federation on producing athletes may benefit investors and athletic directors.

2.5. DELIMITATION OF THE STUDY

The restricted topic research was conducted and titled as such. The research would be limited to Ethiopian athletes' socioeconomic status, performance, and contribution to the country's macroeconomic growth. Based on the subjects of the study, the research sample was delimited to Ethiopian athletes, elite long- and middle-distance runners, coaches, athletes' families, and various sports professionals from specific regional states in Ethiopia.

2.6. LIMITATION OF THE STUDY

Research constraints are inherent to research, as many obstacles can arise during the research process and have been overcome through various mechanisms. The following were the most significant of the numerous limitations of this research process: COVID-19 was the study's primary limitation, followed by the lack of information regarding the total size of the sample population and the absence of a representative sample selection. The other study focused on limited data access, the subject's unstable current residence, and the current implantation rate. Even if the abovementioned restrictions had been present, the researchers could have circumvented them through alternative means.

2.7. ORGANIZATIONAL STRUCTURE OF THE INVESTIGATION

There are eight chapters in the study. The first chapter briefly introduced the study, including its historical context, objectives, problem statement, scope, and limitations. The second chapter examined various relevant literature and documents to define the various concepts and explain the theoretical perspectives and conceptual framework. Various empirical studies conducted on the subject of the investigation are also presented. The third chapter focused on the components of the research methodology, including the research design, research method, sample population, sample size, sampling techniques, data collection instrument, and necessary materials.

In light of the first manuscript titled "Assessment of socioeconomic status and running performance of Ethiopian long and middle-distance runners," the fourth chapter is presented and discussed. Concerning the second manuscript, the fifth chapter discusses Ethiopian athletes' success in relation to altitudinal variations, athlete distribution, and the contribution of regional states to athlete production. Referring to the third manuscript titled Psychological, Sociological, and Economic Determinants of Ethiopian Athlete Success, the sixth chapter is presented and discussed. The seventh chapter is presented and discussed based on the fourth manuscript, "The contribution of Ethiopian athletes to Ethiopia's economic growth." The eighth and final chapter presented and discussed the findings, as well as a summary of the study's concept, conclusion, and recommendations.

3. REVIEW OF RELATED LITERATURE

3.1. BRIEF REVIEW OF LITERATURE

According to a study by Kavita SH (2016) titled The Influence of socio-economic status on the achievement motivation of sportswomen, the study aimed to determine the impact and influence of SES on the achievement motivation of athletes. The research method adhered to the framework of post-hoc analysis. The hypotheses referenced a significant influence of socioeconomic status on the achievement motivation of female athletes. The total sample consists of forty female athletes of varying socioeconomic status. The ages ranged from 19 to 25 and were chosen at random. There is a significant difference between the achievement motivation levels of the low SES and high SES sportswomen.

I have seen another study more focused on the socioeconomic status and athletic performance of urban and rural weightlifters, and the results were contrary to this study. Based on this accomplishment, motivation is inversely proportional to the socioeconomic status of the athletes; however, there is no evidence of a motivational frame of reference reaching the athletes. Therefore, what are the athletes' motivations for performing the task correctly? Is it possible to determine the relationship between socioeconomic status and motivational achievement with a sample size of 40 female athletes? What will occur with large sample size and population sample? How do the validity and reliability of this result appear? There is no evidence that administrative feasibility exists. This requires additional investigation for a precise result.

The research conducted by Sharma (2015) under the title the effect of socioeconomic status on the success of junior weightlifters at the national level was conducted in rural and urban regions. This study aimed to determine the effect of socioeconomic status on the athletic performance of rural and urban weightlifters competing at the junior national level in India. The study employed a mixed research design and descriptive survey research method; the researcher used purposive sampling techniques to select 200 weightlifters from the Manipur National Weightlifting Competition as the study sample, including 100 rural athletes and 100 urban athletes. The researcher used the correlation method to compare the results, which included means, standard deviations, and t-ratios. The final study results demonstrated a positive relationship between socioeconomic status and the athletic ability of male weightlifters. There was also a significant

difference in sports quality between rural and urban male weightlifters of the high, medium, and low socioeconomic status. Sport performance differed between rural and urban male junior national weightlifters with high, medium, and low socioeconomic status. At the junior national level, socioeconomic status had a positive effect on the performance of male weightlifters. High, medium, and low socioeconomic status urban junior national male weightlifters performed better than their counterparts. The purpose of the study by Kodli (2016) was to measure the socio-economic status of the sportspersons of BidarTaluka. The study's title was "The Effect of Socioeconomic Status on the Physical Fitness of Sportspersons." The researcher collected the necessary data using Bharadwaj's (1971) socio-economic status scale. Fifty athletes of high socioeconomic status and 50 athletes of low socioeconomic status between the ages of 18 and 25 were selected randomly from BidarTaluka as a sample of the data.

Here, it is evident that the researcher's objective was to compare the correlation between high and low socioeconomic status athletes and their performance; there was no need to compare the correlation between middle socioeconomic status athletes and sports performance. The researcher used the motor fitness components test to determine the significance of socioeconomic status on the physical fitness of athletes. This study's research calculated means, standard deviations, and t-values.

The study found that socioeconomic status positively influences the physical fitness of athletes. In this study, a significant difference was observed between those with high socioeconomic status and those with low socioeconomic status, leading the researcher to conclude that there is a significant difference between those with high socioeconomic status and those with low socioeconomic status physical fitness components.
Athletes with high socioeconomic status have greater physical fitness than those with a low socioeconomic status.

Pitsiladis (2012). Wilber & Ptsiladis (2012), de Lira et al. (2014a). As indicated by the aforementioned complex factors, Ethiopian athletes' performance is affected by several variables. The researcher was motivated to use scientific methods to examine some of the factors mentioned above in order to obtain and present relatively clear data to other researchers and concerned bodies. The purpose of the study was to establish a correlation between the motivation of Ethiopian athletes and their economic problems. Many other research results differed from

this one in significant ways. This study's findings revealed the difficulties in obtaining the necessary data on the success of Ethiopian athletes, but it concluded that the athletes' strong desire to overcome economic problems and their motivation to do so are the most influential factors in Ethiopia. To indicate, in light of the previous research, that the current state of Ethiopia is conducive to conducting research.

3.2. ACHIEVEMENT MOTIVATION

Achievement motivation is complex and has multiple meanings. It would like to collect various authors' perspectives on how to define it, and I would compile it based on the running success of Ethiopian athletes. According to the book Psychology of Classroom Learning by Thurlow (2008), motivation has multiple meanings but essentially refers to processes that compel an organism to take action. In fact, the word "motivation" is derived from the Latin verb movere, which means "to move." Motivation, therefore, refers to the processes that result in the initiation, continuation, intensity, and quality of behavior. Consequently, "achievement motivation" refers to the processes that lead to behavior that aims to meet a particular criterion or standard.

The criterion may be any formal or informal goal or objective set by an individual or group in any professional or recreational domain that serves as a guide for evaluating success and failure.
Motivate means to induce motion. Motivation is a broad term that encompasses numerous aspects of individual and collective behavior. Motivation is the tendency for the direction and selectivity of behavior governed by conditions and consequences. The tendency for this behavior to persist until the desired outcome is attained. Bell et al. (2022). Athletes would also benefit from learning about the variety of traits elite athletes possess and the psychological techniques commonly used to enhance performance. The motivational condition can influence athletes` behavior, and it may be advantageous for national governing bodies to educate coaches on sports psychology in addition to educating athletes. According to Malipatil (2016), motivation is believed to be the most influential variable in determining behavior. The motivational variables are neither visible nor palpable; they are incidental to observable behavior.
Consequently, motivation may be viewed as the process by which an individual is inspired, compelled, or persuaded to perform a task. Motivate means to induce motion. Motivation is a broad term that encompasses numerous aspects of individual and collective behavior.

3.3. INERTIAL TENDENCIES' POSTULATE IMPLEMENTATION

The implication of the inertial tendencies' postulate/assumption on the facts of inertial tendencies and achievement motivation by Revelle & Michaels (1976), Michaels (1976) revealed the fundamental facts /postulates on the theory of achievement motivation that lead to interesting implications that are typically recognized. This theory of achievement motivation consists of seven postulates and their implications, which are essential to sports performance coaching and other business sectors. This inertial tendency plays a crucial role in the success of Ethiopian runners at the world championship and Olympic level of competition, including football team.

3.3.1. The tendency engage in achievement-oriented behaviour is a multiplicative function of:

- Motivation to pursue success
- The value of success as a motivating factor and
- The subjective probability of completing a task successfully. It is evident that the achievement-oriented activity of Ethiopian athletes is long-distance running, and their tendency is to be competitive on a global scale; their motivation is to overcome their economic problems through the successful completion of their training and participation in competitions.

3.3.2. The incentive value of a task is equal to the probability of success multiplied by its complement.

- Thus, the incentive value of an accomplishment task is equal to its failure probability.
- The task accomplishment of Ethiopian athletes begins during their training sessions, where obstacles and factors that lead to failure are eliminated.

3.3.3. The tendency to avoid tasks that could result in failure is a multiplicative function of:-

- The intensity of the motivation to avoid failure.
- Failure's negative incentive value and
- The likelihood of failure.

Ethiopian athletes' economic problems and their role models, who solve economic problems through long and middle-distance running, reinforce their motivation to avoid failure and reduce the likelihood of failure.

3.3.4. The value of failure as an incentive equals the probability of failure.

The sole motivation of Ethiopian athletes is to resolve economic issues through running rewards; consequently, they strive to achieve the best competition result.

3.3.5. The resultant tendency to engage in an achievement task equals the algebraic sum of the following:

- The tendency to avoid engaging in activities that could result in failure and
- Additional extrinsic motivating forces

3.3.6. The motivation induced by an ultimate objective equals the sum of the motivation induced by each subgoal. (This means that the motivation induced by the general or primary goal is the sum of the motivation induced by each specific goal. Each particular objective is derived from the overall objective and contributes to the ultimate objective.)

4. RESEARCH METHODOLOGY

4.1. RESEARCH DESIGN

The research employed mixed-method designs. The mixed methods research design is a combination of quantitative and qualitative research methods that has its own advantages for analyzing qualitative and quantitative data in a single study and examining the family's complex structure.

4.2. RESEARCH METHOD

In the mixed-method research design, the researcher utilized the convergent parallel research method derived from the mixed design. By obtaining a variety of harmonized data, the objective of this technique was to achieve a more thorough comprehension of the research problem. It is preferable to use both qualitative and quantitative data simultaneously/at the same time.

4.3. SAMPLE SIZE AND POPULATION

The total population of the study consisted of 1500 Ethiopian athletes, Olympic team athletes and coaches, retired athletes, club athletes, project-level athletes, national team coaches, athletics federation officials, sport commission officials, athletes' families, and university sport science instructors. The researcher selected 326 target sample athletes: Eighty-three national team coaches, Olympic level coaches, athletes' families, and 50 athletes' various investment sector managers, for a total sample size of 459.

4.4. DATA COLLECTION METHOD & INSTRUMENT

The researcher used various instruments to collect the necessary data, including questionnaire guilds, interview guilds, and observation guilds, and constructed quantitative and qualitative results using quantitative and qualitative data. A purposive sampling method was implemented by utilizing both primary and secondary data sources. These data collection areas served as indicators of Ethiopian elite athletes' socioeconomic status and level of athletic performance.

5. ASSESSMENT OF SOCIO-ECONOMIC STATUS AND RUNNING PERFORMANCE OF ETHIOPIAN LONG AND MIDDLE-DISTANCE RUNNERS`

5.1. OBJECTIVE

This study aimed to investigate Ethiopian long and middle-distance runners' socioeconomic status and running performance. Specifically, the main objectives of this study were the socioeconomic status effects on athletes' running performance.

5.2. RESEARCH METHOD

The researcher employed the Convergent Parallel research method, derived from the mixed-method design. Obtaining harmonized and complementary data and simultaneously analyzing qualitative and quantitative data in a single phase was intended to provide the most comprehensive understanding of the research problem. The survey data collected from 166 samples using a variety of questionnaires. Sixty-eight were female, 98 were male, and 83 of the samples were elite athletes and athletes’ families.

5.3. RESULT AND DISCUSSION

5.3.1. Result

Even though this study is concerned with assessing the SES of Ethiopian long and middle-distance athletes, there is no socioeconomic measurement scale in Ethiopia and adapting the other countries` SES measurement scale to assess Ethiopian athletes`; based on this, the researcher used the Indian socioeconomic status measurement scale as a reference, which was developed and revised by the two most widely used socioeconomic status measurement scales for classifying people by socioeconomic status, introduced by B.G. Prasad and Kuppuswamy-2021, with the B.G. Prasad scale applying to both rural and urban populations.

No.	**Level of Education of the Household Head**	**Score**
1	Professional degree PhD. or above	7
2	Graduate or Postgraduate	6
3	Intermediate or post high school diploma	5
4	High school certificate	4
5	Middle school certificate	3
6	Primary school certificate	2
7	Illiterate	1

Table 1Education level of the household

BG Prasad 2021 compiles the level of the education score table to assess the socioeconomic status of rural and urban Indian populations. The researchers' measurement scale has seven points, with respondents receiving between one and seven points based on their level of education. One point is awarded for illiteracy, 2 points for a primary school diploma, 3 points for a middle school diploma, 4 points for a high school diploma, 5 points for an intermediate or post-high school diploma, 6 points for a bachelor's or master's degree, and 7 points for a doctorate or higher. This is a determinant of socioeconomic status. variable measurement scale can be implemented to measure Ethiopian athletes` socioeconomic status.

Table 2 Occupation Status of the Household

No.	Occupation of the household head	Score
1	Professional	10
2	Semiprofessional	6
3	Clerical, Shop owner, farmer	5
4	Skilled worker	4
5	Semi-skilled worker	3
6	Unskilled worker	2
7	Unemployed	1

Based on the reference table, the researcher adapted the survey data to reflect the occupation of the household head of Ethiopian athletes. BG Prasad 2021 compiles the level of the occupation

score table to assess the socioeconomic status of rural and urban Indian populations using occupation status as a reference. The researchers' measurement scale consists of ten points, with respondents receiving between one and ten points based on their occupation level. One point is awarded for unemployment, 2 points for unskilled labor, 3 points for semiskilled labor, 4 points for skilled labor, 5 points for the clerical, shop owner, and farmer, 6 points for semiprofessionals, and 10 points for professionals.

Table 3 BG Prassad Monthly Income Measurement Scale January-2021

No.	***Monthly Income of Family***	***Score***
1	≥18229	12
2	9115-18229	10
3	6836-9114	6
4	4557-6835	4
5	2734-4556	3
6	921-2733	2
7	≤920	1

The BG. Prassad monthly income scale has 12 points based on the population's monthly income. 1 point is awarded for a monthly income of 920 INR or less, 2 points are awarded for a monthly income between 921 and 2733 INR, 3 points are awarded for a monthly income between 2734 and 4556, 4 points are awarded for a monthly income between 4557 and 6835 INR, 6 points are awarded for a monthly income between 6836 and 9114 INR, 10 points are awarded for a monthly income between 9115 and 18229, and 12 points are awarded for This measurement scale application for Ethiopian athletes. Their families are based on the direct conversion of Ethiopian currency to Indian rupees.

Table 4, BG Prasad SES Class Measurement Scale January 2021

No.	***Socioeconomic Status Class***	***Total Score***
1	Upper Class	26-29
2	Upper Middle Class	16-25
3	Middle Class	11-15
4	Lower Middle Class	5-10
5	Lower Class	<5

The BG. Prassad socioeconomic status measurement scale is based on the scores from the three tables mentioned above, which are referred to as education level scores, occupation level scores, and monthly income scores. The BG Prasad SES total measurement scale contains 29 points and five SES levels. The socioeconomic status of the head of household is assigned a total of 29 points. The family is assigned to the correct socioeconomic class based on its total score, computed previously. The developer used different scores for the aforementioned socioeconomic class based on the three total scores of Education, Occupation, and the total combined family income, as shown in tables 1, 2, and 3. The five levels of SES are labeled according to the points as follows: 5 points or less for the lower class SES, 5 to 10 points for the lower middle class of SES, 11 to 15 points for the middle class of SES, 16 to 25 points for the upper-middle class of SES, and 26 to 29 points for the upper class of socioeconomic status.

Table 5 SES Class of Ethiopian Athletes Household

SES Class	Frequency	Percent	Valid Percent	Cumulative Percent
Lower Class	**33**	**39.8**	**39.8**	**39.8**
Lower Middle Class	**42**	**50.6**	**50.6**	**90.4**
Middle Class	**8**	**9.6**	**9.6**	**100.0**
Total	**83**	**100.0**	**100.0**	

Table 5 shows the result of Ethiopian athletes` SES backgrounds showed 90.4% from low SES and 9.6% from the middle class. No one came from the higher class of SES.

Figure 1 Ethiopian Athletes` Household SES

Table 6 Ethiopian Athletes` Household Heads Education Level

Level	Frequency	Percent	Valid Percent	Cumulative Percent
Illiterate	30	36.1	36.1	36.1
Primary School	20	24.1	24.1	60.2
Middle school certificate	13	15.7	15.7	75.9
High school certificate	11	13.3	13.3	89.2
Intermediate/Post h/school diploma	1	1.2	1.2	90.4
Graduate or Postgraduate	8	9.6	9.6	100.0
Total	83	100.0	100.0	

Table 6 result indicated the education level of Ethiopian athletes' household heads. More than 60 % of the households have a primary school education or less, 15.7 % have a middle-class certificate, and 13.3 % have a high school certificate, according to the table data. 1,2% of households have an intermediate or post-high school diploma, and 9.6 % have a bachelor's degree or higher. This indicates the educational background of the families of Ethiopian athletes.

Table 7 Ethiopian Athletes` household Heads Occupation Level

Level	Frequency	Percent	Valid Percent	Cumulative Percent
Unemployed	23	27.7	27.7	27.7
Unskilled worker	15	18.1	18.1	45.8
Semi-skilled worker	8	9.6	9.6	55.4
Skilled worker	13	15.7	15.7	71.1
Clerical, Shop owner, farmer	15	18.1	18.1	89.2
Semiprofessional	9	10.8	10.8	100.0
Total	83	100.0	100.0	

The occupation level of Ethiopian athletes' household heads is displayed in table 7. 18.1 % of the households were unskilled workers, 9.6 % were semiskilled workers, 15.7 %were skilled workers, and 18.1 % were clerical shops owners and farmers, and 10.85 percent were semiprofessionals. This study clearly demonstrates that Ethiopian athletes' families' occupational backgrounds do not include any professional athletes.

Table 8 Ethiopian Athletes` Household Head Income Score

Rate		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 920	54	65.1	65.1	65.1
	921-2733	21	25.3	25.3	90.4
	2734-4556	5	6.0	6.0	96.4
	4557-6835	2	2.4	2.4	98.8
	9115-18229	1	1.2	1.2	100.0
	Total	83	100.0	100.0	

The results of Table 8 are used to calculate the socioeconomic status of Ethiopian athletes' families. Table 8 explains the monthly household income used to calculate the socioeconomic status of Ethiopian athletes' families. 65% of the households` monthly income were less than 920 INR, 25% of the families' monthly income were between 921 and 2733 INR, 6% of the families' monthly income were between 2734 and 4556 INR, 2.4% of their monthly income was between 4557 and 6835 INR, and 1.2% of the households' monthly income were between 9115 and 18229 INR.

5.3.1.1. Ethiopian athletes' running performance

Different levels of participation in long and middle-distance running competitions determine the performance of Ethiopian athletes. Their competition statuses are indicators of their level of performance, as all Ethiopian athletes progress through various stages of the competition and are employed by or affiliated with an athletics club, training center, or project-level training program. Lastly, based on their competition results, they have competed in various international long and middle-distance events. To determine athletes` level of participation, the researcher was provided with questions about the athletes' competition history. The researcher then labeled and developed a reference frame based on the seven-point scale for the athletes' performance levels. The competition levels of Ethiopian athletes were as follows:

- Olympic level: 7 points
- Athletics world championship 5 point
- IAAF level and 5 points of each African level for the diamond league 4 point
- 2-point Ethiopian athletics club championship
- Ethiopian regional competition in athletics 1 point

The participation score at the project level was one point, and the total points were reduced to three groups based on their participation status results. These were 18 to 25 points for participation at a high level, 10 to 17 points for participation at a medium level, and 1 to 9 points for participation at a low level in long and middle-distance running competitions.

The researcher employs the abovementioned group of performance levels to facilitate the interpretation of qualitative data into quantitative data and the correlation with socioeconomic status data. In addition, there are no quantitative data on the athletics performance level of Ethiopian athletes, which could serve as a reference point for other researchers conducting related research. Based on this factor, the researcher provided the following table of long and middle-distance running performance data for Ethiopian athletes.

Table 9 Ethiopian Athletes` Running Competition Level Score

No.	TYPES OF COMPETITION	SCORE
1	Olympic level competition	7 points
2	World athletics championship	5 points
3	IAAF level and diamond league	5 points
4	African level	4 points
5	Ethiopian athletics club championship level	2 points
6	Ethiopian regional level athletics competition	1 point
7	Project level participation	1
TOTAL SCORE		25

- All participation = 25 points
- All, except Olympic = 18 points
- All, except Olympic and World championships, = 13 points
- All, except Olympic, World championship, and IAAF/ Diamond league 8 points
- African level and below = 4 points
- Ethiopian club championship 2 points
- Regional competition or Project level participation = 1, Both =2 points

Table 10 Athletes Performance Data

Score of participation		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	4	4.8	4.8	4.8
	6	2	2.4	2.4	7.2
	8	6	7.2	7.2	14.5
	10	4	4.8	4.8	19.3
	13	7	8.4	8.4	27.7
	18	32	38.6	38.6	66.3
	23	2	2.4	2.4	68.7
	25	26	31.3	31.3	100.0
	Total	83	100.0	100.0	

The data in table 6 were used as a performance level reference standard because the study attempted to include Olympic and international competition participation at the highest level of athletics performance. This was because the athletes had been assigned to their national team internationally, with their points greater than 18 and up to 25. 72.3 % of respondents demonstrated an exceptional level of running performance. 13.5 % of respondents performed at a medium level, while 14.5 % performed at a low level. This data distribution appeared as depicted in graph 3.

Table 11 Ethiopian athletes Competition Level

Level		Frequency	Percent	Valid Percent	Cumulative Percent
VALID	LOW LEVEL	12	14.5	14.5	14.5
	MEDIUM LEVEL	11	13.3	13.3	27.7
	HIGH LEVEL	60	72.3	72.3	100.0
	TOTAL	83	100.0	100.0	

Table 11 presents the results of Ethiopian athletes' participation in long- and middle-distance competitions based on the performance data of table 6, which served as the scoring standard for Ethiopian athletes' performance levels. The table results indicated that 14.5% of Ethiopian athletes performed at a low level, 13.3% performed at an intermediate level, and 72.5% performed at a high level, based on table 7, table 6, and table 5 performance standards, respectively.

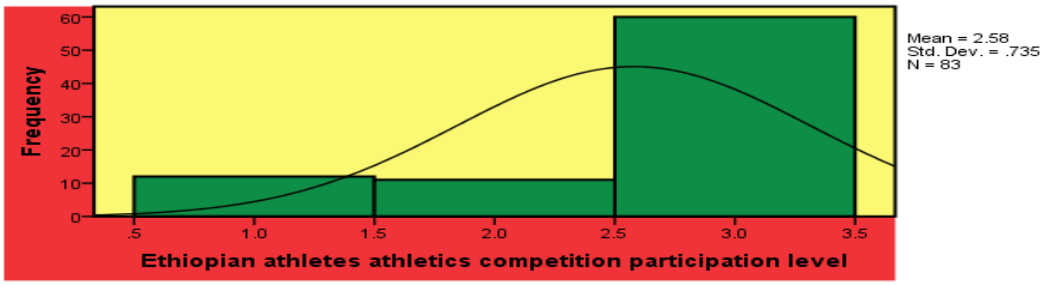


Figure 2Ethiopian Athletes` Competition Level

Figure 3 indicated that Ethiopian athletes` competition participation level derived from table 7 and the mean of the data was 2.58 that the highest result was three and the lower was one, and then the mean value is found on the highest.

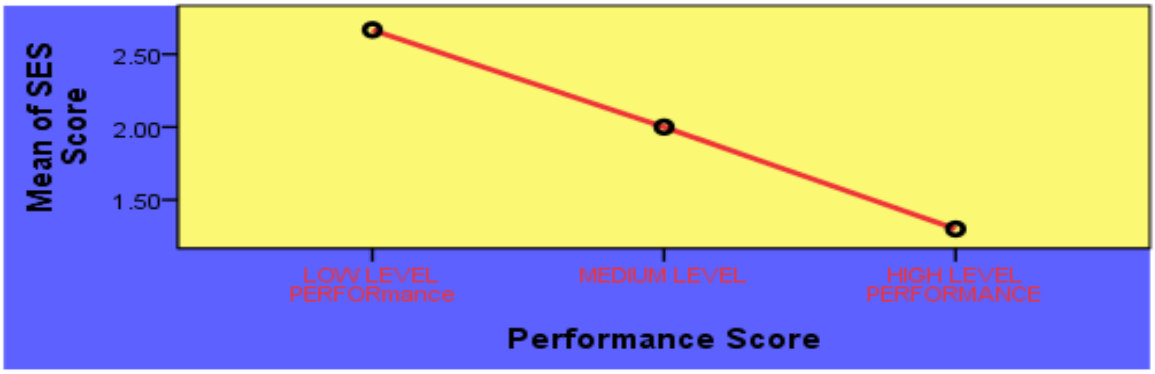


Figure 3 SES Score Relationship to Performance Level Score

Table 12 Hypothesis Summary

Hypothesis Test Summary				
	Null Hypothesis	**Test**	**Sig.**	**Decision**
1	The distribution of Ethiopian athletes' previous family socioeconomic status is the same across categories of Ethiopian athletes' athletics competition participation levels.	Independent-Samples Kruskal-Wallis Test	.672	Retain the null hypothesis.
2	The distribution of Ethiopian athletes' previous family household head education score is the same across categories of Ethiopian athletes' athletics competition participation level.	Independent-Samples Kruskal-Wallis Test	.496	Retain the null hypothesis.
3	The distribution of Ethiopian athletes' previous family household head occupation scores is the same across categories of Ethiopian athletes' athletics competition participation levels.	Independent-Samples Kruskal-Wallis Test	.515	Retain the null hypothesis.

4	The distribution of Ethiopian athletes' previous family household head income scores is the same across categories of Ethiopian athletes' athletics competition participation levels.	Independent-Samples Kruskal-Wallis Test	.181	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

The above descriptive statistics results are not used to determine whether to reject or accept a hypothesis test. The researcher used another test method called the nonparametric test method. The reason for using a nonparametric test was the data distribution, which was not normal. From the data normality test result, the researcher used the Kruskal- Wallis test to summarize the hypothesis. The hypothesis test summary compared Ethiopian athletes' previous family socioeconomic status score, Ethiopian athletes' previous family household head education score, Ethiopian athletes' previous family household head occupation score, and Ethiopian athletes' previous family household head income score.

Table 13 Hypothesis Summary 2

Hypothesis Test Summary				
No.	**Null Hypothesis**	**Test**	**Sig.**	**Decision**
1	The distribution of Ethiopian athletes' previous family socioeconomic status is the same across categories of Ethiopian athletes' athletics competition participation level.	Independent-Samples Kruskal-Wallis Test	.672	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

The researcher summarized the hypothesized relationship between Ethiopian athletes' socioeconomic status score and the running performance score to accept or reject the hypothesis. The null hypothesis is accepted on the grounds that Ethiopian long and middle-distance runners' socioeconomic status was low when they began long-distance training. And Ethiopian long and middle-distance runners' performance increased, and their socioeconomic status decreased.

The null hypothesis was that Ethiopian long- and middle-distance runners' socioeconomic status was inversely proportional to their running performance. This indicates that the socioeconomic status of Ethiopian athletes decreased as their performance increased, and their socioeconomic status decreased as their performance level increased.

Table 14 Kruscal Walis Test Statstics

Test	Ethiopian athletes' previous family household head education score	Ethiopian athletes' previous family household head occupation score	Ethiopian athletes' previous family household head income score
Chi-Square	1.401	1.327	3.418
df	2	2	2
Asymp. Sig.	.496	.515	.181

The result of the Kruskal-Wallis test indicated that the value of the critical table with a confidence level of 95 percent, a significance level of 0.496, and two degrees of freedom was 5.9915 and that the H value for the first question on the preceding table was 1.4001. The critical table value is greater than the test value, as 5.9915 > 1.401. According to the test definition, the null hypothesis is accepted as the previous Ethiopian athletes' families' household head education score results` are inversely correlated with athletes' performance. The three socio-economic indicators variables are inversely correlated with Ethiopian athletes' running performance.

The same interpretation of Ethiopian athletes' previous family household head occupation scores with 2 df, H value is 1.327 and the critical table value of 5.9915 with 0.515 significance level that the critical table value is greater than that of chi-square value called H value = 5.9915>1.327. Then the decision is the null hypothesis accepted as it was that Ethiopian athletes' family occupation supports the family socioeconomic status and inversely correlates with the athletes` performance level.

The third analysis compared the athletes' family income score with family socioeconomic status and Ethiopian athletes' running performance level score. The results indicated that the critical table value with a 95 percent confidence level (0.050), 2 degrees of freedom, and a significance level of 0.217 was less than the H value of 3.418. The definition of the Kruskal-Wallis test leads to the acceptance of the null hypothesis, given that the income level score of Ethiopian athletes' families did not differ significantly from their socioeconomic status and was inversely proportional to their performance score; that is, family income level score was inversely proportional to athletes' performance.

In the final analysis, it was determined that the above three variables- education level, occupation level, and income level directly affect a family's socioeconomic status, such that if one variable

increased, the other variable increased as well. If one variable decreased, the other variable decreased as well. From the perspectives mentioned above, the researcher analyzed the main research hypothesis that as Ethiopian athletes' socioeconomic status increased, their athletic performance decreased. As Ethiopian athletes' athletic performance increased, their socioeconomic status decreased. The related hypothesis test indicated that we should accept this hypothesis. The following table summarizes and analysis of the socioeconomic standing and performance level;

Table 15. Kruskal-Wallis Tests of SES and Running Performance

	Ethiopian athletes' athletics competition participation level
Chi-Square	.989
Df	2
Asymp. Sig.	.610

The Kruskal-Wallis test result revealed that Chi-Square had a value of 0.989 with 2 degrees of freedom and significance values of 0.610. The critical table result with a confidence level of 95 percent (0.050) and two degrees of freedom (df) was 5.9915, which was greater than the H value and led to the acceptance of the null hypothesis. The null hypothesis posited that socioeconomic status and running performance were inversely correlated, such that as socioeconomic status increased, running performance decreased and vice versa. This research finding served as a framework for other researchers to conduct critical research on the abovementioned topic.

5.4. DISCUSSION

Socioeconomic status is the position of an individual or group within a social structure in terms of employment status, educational status, income condition, wealth, healthiness, housing standards, and social participation status. This definition was derived from the definitions of various studies to establish a framework for common definitions based on a global socioeconomic status measurement variable. Most studies use an individual's or group's position within a social structure regarding employment, education, income, wealth, residential house standards, savings behavior, health insurance, cast level, and other variables to define socioeconomic status. Some socioeconomic status variables are inapplicable in Ethiopia, such as a cast of ethnicities, wealth conditions, (not about wealth) health insurance, saving habits, and

saving mechanisms. This is because the way of life in Ethiopia differs from that of other countries, and rural and urban areas of Ethiopia were not comparable at the time of this study, even within the same state.

According to the research data collected from Ethiopian athletes and athletes' families, their incomes are not constant and vary by season.

Several studies cited in the preceding section of the literature found a positive correlation between the socioeconomic status of athletes and their families and their sports participation and level of performance. Athletics performance results from many combined variables, such as socioeconomic status, training altitude, working culture of sports task, nutrition, achievement motivation, role model effect, athletes' need for success, and need to avoid failure. This study result demonstrated that the relationship between the performance of Ethiopian athletes and their socioeconomic status was completely different from the results of other studies. The results Kodli (2016), Elmagd et al. (2016), Hashemi et al. (2013), Singh (2017), Pavón et al. (2010), Eime et al. (2015), Ali et al. (2012), and so many studies results support the above.

Based on the findings of this study, 85.5% of Ethiopian athletes who participated in the study were world-class athletes who also excelled in Ethiopia. Furthermore, they have participated in international long and middle-distance running competitions and Olympic competitions and won medals.

39.8 % of Ethiopian athletes originated from families with a lower socioeconomic status, 50.6% from a lower-middle socioeconomic background, and 9.6% from a middle socio-economic family. 90.4% of elite Ethiopian long- and middle-distance runners hailed from families with a lower socioeconomic status.

The study's results indicated that Ethiopian athletes' success was due to overcoming economic obstacles in addition to training effects. The correlation between the performance of Ethiopian long and middle-distance runners and their socioeconomic background data resulted in an inverse relationship between the two variables. This means that as the socioeconomic status of Ethiopian athletes increases, their athletic performance will decrease, and as their socioeconomic status increases, so will decrease their athletic performance.

5.5. CONCLUSION

The study confirmed that as the performance of Ethiopian long- and middle-distance runners increased, their socioeconomic status decreased; as their performance decreased, their socioeconomic status increased; and as their performance remained unchanged, their socioeconomic status increased.

According to the findings of this study, no one came from a family with high socioeconomic status, the athletes' highest socioeconomic status was middle class, and almost all Ethiopian athletes came from a lower socioeconomic background. The socioeconomic status of long- and middle-distance runners from Ethiopia positively affects their running performance.

The findings of this study 85,5 % of Ethiopian athletes who participated in this study were high-level performers internationally as well as domestically; they have international and Olympic level long and middle-distance running competition participation and medal history, including Olympic gold medalists; however, they came from a lower socioeconomic background and achieved running success. This study concluded that the performance of Ethiopian long- and middle-distance runners and their socioeconomic status are inversely proportional.

The correlation between the performance of Ethiopian long- and middle-distance runners and their socioeconomic background data resulted in an inverse relationship between the two variables. This means that as the socioeconomic status of Ethiopian athletes improves, their athletic performance will decrease, and as their socioeconomic status increases, so will decrease their athletic performance.

The number of Ethiopian long- and middle-distance runners with a low socioeconomic status who participated in formal running training was insufficient to bolster the above results regarding the socioeconomic status of Ethiopian athletes and performance-related issues. Through sports, African Americans can attain both economic and social success. Harrison, Azzarito, and Burden, (2004).

6. SOCIOLOGICAL, PSYCHOLOGICAL AND ECONOMIC

6.1. OBJECTIVE

The major goals of this study were to examine the relationship between long-distance running success and Ethiopian athletes' strong desire to overcome financial difficulties and determination to attain economic success. The researchers created the study's methodology to accomplish the study's goals. The study examines and analyses the following ideas derived from this article's hypothesis: Ethiopian athletes' motivation for success in long and middle-distance competitions, Ethiopian athletes' drive to solve financial issues, and Ethiopian athletes' success in relation to role models.

6.2. MATERIALS AND METHOD

6.2.1. RESEARCH DESIGN

Mixed method research designs were employed in the study, combining quantitative and qualitative research methodologies. The researcher employed the mixed-design, convergent parallel research methodology.

6.2.2. SAMPLING TECHNIQUES, DATA COLLECTION METHOD AND POPULATION

A total of 1500 Ethiopian athletics sports families were used as a sample population for this study, including athletes, retired athletes, club athletes, project-level athletes, athletes' families, coaches, sport commission officials, athletics federation employees, referees, instructors from various universities' sport science departments, and athletes managers. In this study, the researcher by using purposive sampling techniques 166 members of the targeted sample population, including 83 well-known athletes, 83 coaches, sports commission officials, sports federation staff, referees, and instructors from various institutions' sports science departments, participated.

6.3. RESULT

One hundred sixty-six respondents made up the total sample for this study. They were divided into two groups: 83 athletes who had competed in high-level international long-distance athletics

competitions and 83 sports professionals who worked as personal coaches for athletes, Olympic team coaches, national team coaches, sport commission officials, athletics federation professionals, athletics sports referees, and university sport science instructors, and athletics officials. Nine items were examined in this result section.

Athletes and coaches made up the response groups, and the items were classified in alphabetical sequence from A to I. Sports professionals, sports referees, athletics federation officials, and sports commission officials were all assigned to the coaches` group as a single group. According to the results of the Kruskal-Wallis H test based on the data analysis table below, there is no significant difference between the groups if the obtained H value is less than the value of the table results on the critical table of (,X^2.) Otherwise, there is a difference between the groups if the obtained H value is equal to or greater than that value. Descriptive statistical data is important to evaluate the data and determine how the item response appears. The tables below are divided into two portions for data visibility;

TABLE 15 ITEMS AND ITS CODE

NO.	ITEM CODE	ITEMS
1	A	Ethiopian long and middle-distance runners strongly desire to overcome the economic problem through athletics sports.
2	B	Low socioeconomic status has positive effects on Ethiopian athletes running performance
3	C	Economic problems can motivate to get good running performance in Ethiopia
4	D	When Ethiopian long and middle-distance runners join formal running training with low socioeconomic status
	E	Athletics sport has significant economic change on Ethiopian athletes' life and their families
5	F	ELMD runners have role models who overcame economic problems through LMD running participation
6	G	ELMD running athletes faced an economic problem when they joined long-distance training
7	H	Ethiopian athletes have motivational factors to join long-distance running
8	I	Motive when you join training to overcome your economic problem through long-distance running participation

6.3.1. DESCRIPTIVE STATISTICS

TABLE 16 DESCRIPTIVE STATISTICS

ITEM CODE	N	MEAN	STD. DEVIATION	MINIMUM	MAXIMUM
A	166	3.57	1.276	1	5
B	166	3.82	1.217	1	5
C	166	3.69	1.111	1	5
D	166	3.70	1.076	1	5
E	166	4.01	1.131	1	5
RESPONDENT GROUPS	166	1.50	.502	1	2

The results of the data analysis in the section above have revealed to us the psychological, sociological, and economic factors that influence Ethiopian athletes' success in long- and middle-distance races. To be clear, concise, and specific, Ethiopian long-distance runners' participation success in the various world champion. Olympic games and other competition-related item responses of the two respondent groups result in psychological, sociological, and economic determinants of athletes' success descriptive result based on the two independent groups of respondents mean ***calculated as*** $\mathbf{M \pm SD}$. The mean plus or minus standard deviation was determined for each item using the code for each item.

Ethiopian middle and long-distance runners show a significant willingness to use athletics sport to solve their financial problems, according to item "A" = 3.57 ± 1.276.

Item **"B"** = 3.82 ± 1.276, Low socioeconomic status has positive effects on Ethiopian athletes running performance,

Item **"C"** $= M \pm SD = 3.69 \pm 1.111$, LMD Economic problems can motivate to get good running performance in Ethiopia,

Item **"D"** $M \pm SD = 3.70 \pm 1.076$, When Ethiopian long and middle-distance runners join formal running training with low socioeconomic status,

Item **"E"** = $M \pm SD = 4.01 \pm 1.131$, Athletics sport has significant economic change on Ethiopian athletes' life and their families.

TABLE 17 DESCRIPTIVE STATISTICS

	N	MEAN	STD. DEVIATION	MINIMUM	MAXIMUM
F	166	3.99	1.087	1	5
G	165	4.36	.819	2	5
H	166	4.17	1.019	1	5
I	166	4.01	1.157	1	5
RESPONDENT GROUPS	166	1.50	.502	1	2

Item **"F"** = $M \pm SD = 3.99 \pm 1.087$, ELMD runners have role models who overcame economic problems through LMD running participation.

Item **"G"** $M \pm SD = 4.36 \pm 0.819$, ELMD running athletes faced economic problems when they joined long-distance training.

Item **"H"** $M \pm SD = 4.17 \pm 1.019$. Ethiopian athletes have motivational factors to join long-distance running.

The item **"I"** $M \pm SD = 4.01 \pm 1.157$, Ethiopian athletes' motive when they join training to overcome their economic problem through long-distance running participation.

6.3.2. HYPOTHESIS TEST SUMMARY

TABLE 18 HYPOTHESIS TEST

Hypothesis Test Summary				
	Null Hypothesis	**Test**	**Sig.**	**Decision**
1	The distribution of A is the same across categories of RESPONDENT GROUPS.	Independent-Samples Kruskal-Wallis Test	.179	Retain the null hypothesis.
2	The distribution of B is the same across categories of RESPONDENT GROUPS.	Independent-Samples Kruskal-Wallis Test	.273	Retain the null hypothesis.
3	The distribution of C is the same across categories of RESPONDENT GROUPS.	Independent-Samples Kruskal-Wallis Test	.212	Retain the null hypothesis.
4	The distribution of D is the same across categories of RESPONDENT GROUPS.	Independent-Samples Kruskal-Wallis Test	.114	Retain the null hypothesis.
5	The distribution of E is the same across categories of RESPONDENT GROUPS.	Independent-Samples Kruskal-Wallis Test	.054	Retain the null hypothesis.
6	The distribution of F is the same across categories of RESPONDENT GROUPS.	Independent-Samples Kruskal-Wallis Test	.214	Retain the null hypothesis.
7	The distribution of G is the same across categories of RESPONDENT GROUPS.	Independent-Samples Kruskal-Wallis Test	.941	Retain the null hypothesis.
8	The distribution of H is the same across categories of RESPONDENT GROUPS.	Independent-Samples Kruskal-Wallis Test	.883	Retain the null hypothesis.

9	The distribution of I is the same across categories of RESPONDENT GROUPS.	Independent-Samples Kruskal-Wallis Test	.028	Reject the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.				

TABLE 19 H TEST STATISTICS

TEST	A	B	C	D	E
Chi-Square	1.804	1.200	1.556	2.501	3.720
Df	1	1	1	1	1
Asymp. Sig.	.179	.273	.212	.114	.054

Based on a comparison between the H result and the table X^2result and then the results of the Kruskal Wallis test with 1 degree of freedom and 0.05 standard error, the H value is on the above table, and the table value of X^2= 3.8415.

NB. This test result $if\ X^2$ >H, there is no significant difference in accepting the null hypothesis.

I$f\ X^2 \leq$ H there is a significant difference and rejecting the null hypothesis and using an alternative hypothesis, X^2 is critical table value, and H is the Chi-Square result of the Kruskal-Wallis test

A. Statement connected to ITEM "A" Wallis test with one degree of freedom and a 0.05 level of significance = 0.179. The table value for X^2=3.8415, and the H value is 1.804. Based on this finding, H is less than X^2's value, X^2 >H = 3.8415> 1.804, H is smaller than X^2in terms of value. Because the test result supports accepting the null hypothesis that Ethiopian long and middle-distance runners have a great ambition to overcome economic problems through athletics, the above statement is accepted as true.

B. Statement pertaining to ITEM "B" In the Wallis test, the H value is 1.200, and the table value for X-2 is 3.8415 with 1df (degree of freedom) and 0.05 significant level = 0.273. Based on this finding, H is less than X^2's value, X^2 >H =3.8415>1.200. Because the test results support accepting the null hypothesis that low socioeconomic position has favorable effects on Ethiopian athletes' running performance, the assumption mentioned above is accepted as true.

C. Statement pertaining to **ITEM "C"** The Wallis test's H value is 1.556, and the table value for $X^2$is 3.8415 with 1df (degree of freedom) and 0.05 significance level = 0.212. Based on this result, X^2 >H =3.8415>1.556, H is less than X^2's value. Because the test results support

accepting the null hypothesis that economic issues can encourage Ethiopian runners to achieve high-performance levels, the claim mentioned above is accepted as true.

D. Statement related to **ITEM "D**" The Wallis test's H value is 2.501, and the table value for X^2 is 3.8415 with 1df (degree of freedom) and 0.05 significance level = 0.114. Based on this finding, = 3.8415> 2.501, which is H smaller than X^2. The test result supports the null hypothesis; hence, the claim is accepted as true. Ethiopian long and middle-distance runners enrol in organized running training with low socioeconomic status.

E. Statement related to ITEM "E" The Wallis test's H value is 3.720, and the table value for $X^2$is 3.8415 with 1df (degree of freedom) and 0.05 significance level = 0.054. Based on this finding, H is less than X^2's value (X^2 >H = 3.8415> 3.720). Because the test results support accepting the null hypothesis that athletics sport has a major economic impact on Ethiopian athletes' lives and those of their families, the assumption mentioned above is accepted as true.

Table 20 H Test Statistics 2

TEST	F	G	H	I
Chi-Square	1.545	.006	.022	4.824
Df	1	1	1	1
Asymp. Sig.	.214	.941	.883	.028

F. Statement pertaining to **ITEM "F"** The Wallis test's H value is 1.545, and the table value for X-2 is 3.8415 with 1df (degree of freedom) and 0.05 significance level = 0.214. Based on this finding, H is less than X^2 by the result =3.8415>1.545. Based on this finding, the result = 3.8415> 1.545, which is H smaller than X^2. Because the test results support accepting the null hypothesis, the claim mentioned above is accepted as true. ELMD runners have role models who overcome financial difficulties by participating in LMD running.

G. ITEM "G" Wallis test, 1df (degree of freedom), 0.05 significant threshold, 0.941, 0.006 for H, and 3.8415 for the table value of X^2. This result indicates that H is less than X^2., with X^2>H =3.8415 >0.006 being the result. The test results support the null hypothesis that coaches, sports professionals, and athletes all share the same belief that ELMD running athletes have faced economic problems when they join long-distance training. That is how the statement mentioned above leads to accepting their null hypothesis.

H. ITEM "H" Wallis test with 1 degree of freedom and 0.05 significance level = 0.883, the H value is 0.022, and the table value for X^2= 3.8415. This result indicates that H is less than

$X^2$with X^2>H =3.8415 0.883. The claim mentioned above is accepted in its current form due to the test result's support of the null hypothesis and the consensus among athletes and sports professionals regarding what drives Ethiopian runners to pursue long-distance running.

I. **ITEM "I"** The H value is 4.824, and the table value of X^2 is 3.8415 for the Wallis test with 1df (degree of freedom) and 0.05 significance level = 0.028. Based on this discovery, H exceeds X^2value, .'s X^2≤H =3.8415≤4.824. The statement mentioned above indicates that the null hypothesis is rejected and that an alternative hypothesis should be used. This is because the test result supports rejecting the null hypothesis that there is no significant difference in the related responses of the two independent groups' results when they participate in long-distance running for related purposes when they begin training.

6.4. DISCUSSION

6.4.1. ETHIOPIAN ATHLETES` STRONG DESIRE

According to the study, Ethiopian long and middle-distance runners greatly desire to overcome financial difficulties through running sports. Of the respondents, 74.7 % agreed that long-distance running incentives would help them do this. Ethiopian long-distance and middle-distance runners strongly desire to alleviate economic problems through participation in long-distance and middle-distance running. According to the respondents' responses, 74.7% agreed or strongly agreed with the respondents' strong desire to do either of these things. The other respondent's response, which was 25.3 %, had no bearing on this judgment. The Kruskal-Wallis test with 1df (degree of freedom) and 0.05 significance level = 0.179. The H value is 1.804, and the table value of X^2 is 3.8415. Based on this result, the H value greater than that of X^2 > H=3.8415> 1.804. Based on this result, the H value is less than that of X^2 > H = 3.8415> 1.804 The above statement is accepted because the test result supports accepting the null hypotheses.

6.4.2. LOW SOCIOECONOMIC STATUS EFFECTS ON PERFORMANCE

According to the descriptive data result, 89% and 77 % of the respondents agreed that low socioeconomic status positively impacts Ethiopian long- and middle-distance athletes' success and that economic hardships can inspire athletes to perform well in Ethiopia. These respondents

shared a similar attitude that low socioeconomic status positively impacts Ethiopian athletes' running performance. And the results of the hypothesis test allow us to accept it.

6.4.3. ECONOMIC PROBLEM AND MOTIVATION

The Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.212, the H value is 1.556, and the table value of, X^2. is 3.8415, and the test result of the H value less than that of, X^2 of critical table value, X^2,> H=3.8415> 1.556. The respondents' responses to the item related to economic problems can motivate people to run well in Ethiopia. Because the test results support accepting the null hypothesis.

The study's findings demonstrated that Ethiopian athletes' economic difficulties are a major motivator for good running results. Adversity is a part of achievement, and you won't achieve success without struggle. They have endured challenging training periods, yet their performances have been outstanding globally. They were driven to engage in high-level training and have faced a variety of challenges related to athletic training as a result of their situation, which was tied to their ability to overcome their financial issues through long distance running

6.4.4. ETHIOPIAN ATHLETES JOIN FORMAL TRAINING

The study concludes that Ethiopian athletes joined formal athletics training with low socioeconomic status. Both groups of respondents gave positive answers to related items when Ethiopian athletes join formal running training with low socioeconomic status. The descriptive statistical data tell us the respondent mean, $M \pm SD = 3.70 \pm 1.076$ and the Kruskal-Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.114, the H value is 2.501 and the table value of $X^2$is 3.8415, and then the H value less than that ofX^2, X^2> H =3.8415> 2.501 the H value less than that of X^2 the statement is accepted as it was because test results support the null hypothesis that when Ethiopian long and middle-distance runners join formal running training with low socioeconomic status.

6.4.5. SIGNIFICANCE OF ECONOMIC CHANGE IN ATHLETES AND THEIR FAMILIES` LIFE

The statement was given to the respondent group, who would look at the substantial economic impact on Ethiopian athletes, their families, and their way of life. The descriptive statistical

outcome revealed that 85.3% of the respondents agreed with the notion connected to the significant economic shift in Ethiopian athletes' lives and their families' lives. In the Kruskal-Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.054, the H value is 3.720, and the table value of X^2 is 3.8415. The H value is less than that of X^2, X^2 > H=3.8415> 3.720. The test results support the claim that Ethiopian middle and long-distance runners have experienced a significant economic change in their lives as well as the lives of their families.

6.4.6. THE ROLE MODEL EFFECTS ON ATHLETES' PERFORMANCE

The respondents' responses did not differ considerably, and they supported Ethiopian athletes as role models who had overcome financial difficulties by engaging in long and middle-distance running. According to descriptive statistical data, 86% of respondents agreed or strongly agreed those role models who overcame financial challenges by participating in athletics exist. The mean descriptive value was M ± SD=3.991.087, indicating that Ethiopian long and middle-distance runners have role models who successfully overcame financial difficulties.

The same as the hypothesis test result of the Kruskal-Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.214, the H value is 1.545 and the table value of X^2 is 3.8415. Based on this result, the H value is less than that of X^2 > H=3.8415> 1.545. There is no significant difference between the two groups of respondents, and they agreed with the statement. We can accept the conclusion because the test results support the null hypothesis that Ethiopian long and middle-distance runners have role models who overcame economic problems through long and middle-distance running participation.

6.4.7. MOTIVATIONAL FACTORS

According to the qualitative data, economic issues were the primary reason Ethiopian athletes compete in long-distance running and achieve good running results in Ethiopia. The respondents supported this finding, who made up 80.3% of the sample. The respondents' responses suggested Ethiopian athletes' financial issues were resolved through running participation. When they enrolled in formal long and middle-distance running training to address their economic issues, Ethiopian long- and middle-distance runners began their long-distance training and encountered financial difficulties. Most respondents who provided qualitative data on their views on role

models cited Haile Gebresilasie, Kenenisa Bekele, Derartu Tulu, Birhane Adere, and Gezahgne Abera as being among their inspirations.

6.5. CONCLUSION

166 Ethiopian athletes directly engaged in this study, 83 of whom were top-level athletes, and 83 different sports professionals who participated in variables connected to Ethiopian athletes' running success.

Middle and long-distance running has historically been successful in several parts of the world. Despite this, it is still unclear whether being an East African middle or long-distance runner has any genetic or physiological advantages. It is most probable that there are other factors contributing to their success. (Randall L Wilber & Pitsiladis, 2015).

Based on the results of this study, Ethiopian long and middle distance runners' success was determined by several factors, including training altitude, the influences of role models, athletes` motivation to overcome their financial difficulties (athletics as a livelihood strategy to get out of poverty), and other comparative advantages such long-term living at high altitudes combined with training at low principle at elevations. (TOLA, 2018).

The athletes' great desire was sparked by the example set by their long- and middle-distance running competition participation-solving role models. This study's findings covered a variety of Ethiopian athletes' achievements. Still, the conclusion that best fits the evidence is that these athletes put in a lot of effort to reach their objectives, as discussed in sections of the introduction.

The birthplace altitudes of the present Ethiopian athletes range from 1500 meters to 4036 meters above sea level. The altitude distribution for these Ethiopian athletes is not unusual for other nations in Africa or the rest of the world. All countries around the globe with locations close to the height mentioned above have an identical likelihood of experiencing long and middle-distance running success. Ethiopian long and middle-distance runners were created to have a strong desire to overcome economic problems through athletics sport because financial problems can motivate to get good running performance in Ethiopia. In addition to this altitude-related question, Ethiopian long and middle-distance runners faced economic difficulties when they began formal running training with low socioeconomic status.

First, Ethiopian athletes have role models who overcame financial difficulties by participating in long and middle-distance running. These served as motivational factors for them to take up long-distance running. These runners received rewards from competitions that significantly improved their lives financially. Finally, by default, Ethiopian athletes implemented the achievement motivation postulate designed by Atkinson Revelle & Michaels (1976). This study result and the researcher recommended applying this Atkinson achievement motivation postulate to every task and institutional organization, including military institutions whose primary objective is success.

7. ETHIOPIAN ATHLETES` SUCCESS WITH ALTITUDINAL VARIATIONS, ATHLETES DISTRIBUTION, AND REGIONAL STATES CONTRIBUTION TO ATHLETES' PRODUCTION

7.1. OBJECTIVES

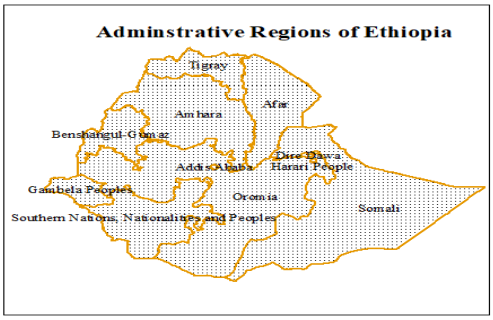
This research aimed to investigate Ethiopia athletes` success in relation to altitudinal variations, athletes' distribution and regional states' contribution to athletes' production. The study-specific objective was to investigate the success of Ethiopian athletes on Olympic competitions since 1960, training and living environment distribution compared with competition area of Olympic games hosted countries' altitude, and the winner athletes training altitude. The study specifically shows Ethiopian athletes' production environment in Ethiopia and is used as the frame of reference for other investigators.

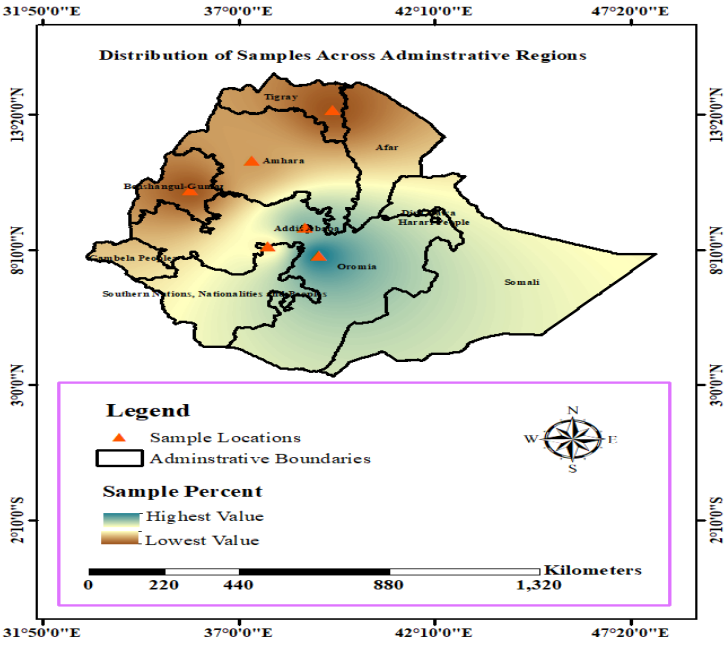
7.2. MATERIAL AND METHOD

The study used mixed methods research designs. Mixed methods research design and on the mixed method research design, the researcher was used Convergent Parallel research method.
The study sample population was1500 Ethiopian athletes, retired athletes, club athletes, project level athletes`, among this population the researcher selected 326 target samplewith purposive sampling technique. The researchers have been used both primary and secondary sources of data.

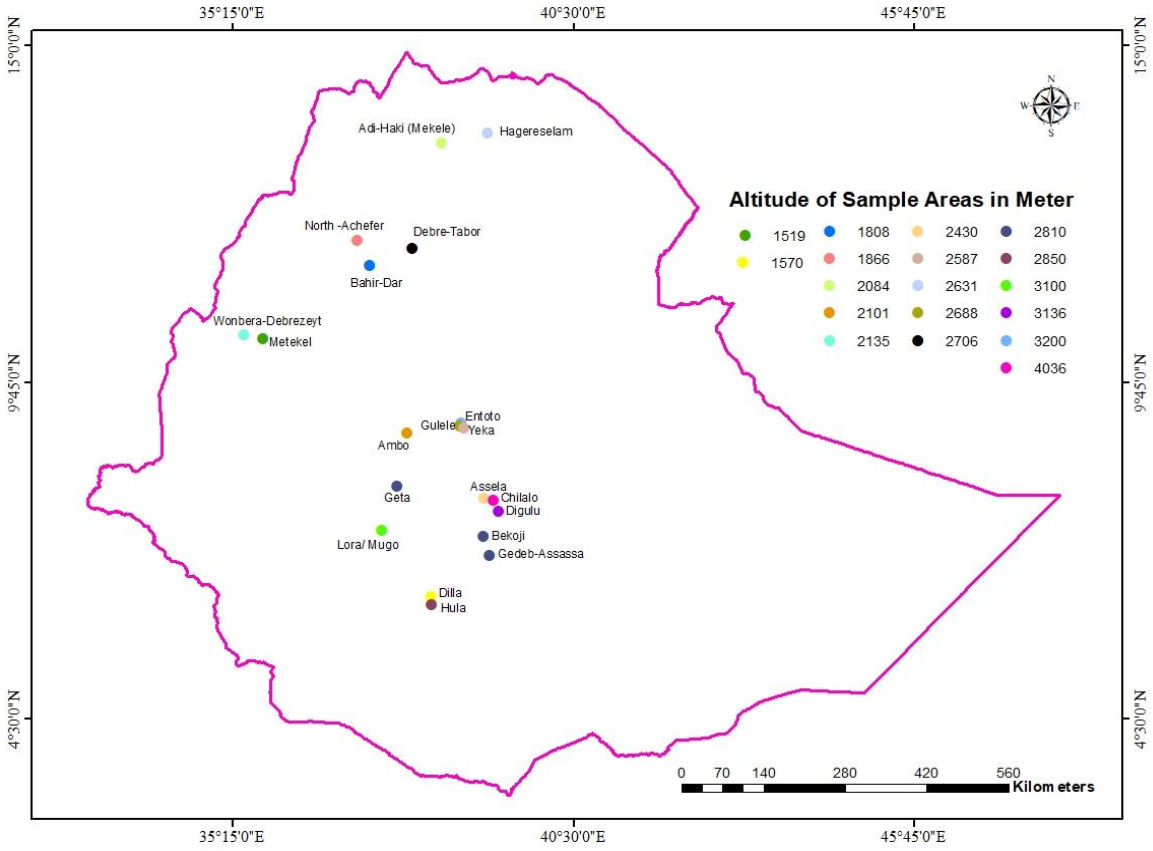
7.3. ORGANIZATION

7.3.1. GEOGRAPHICAL SAMPLE LOCATION



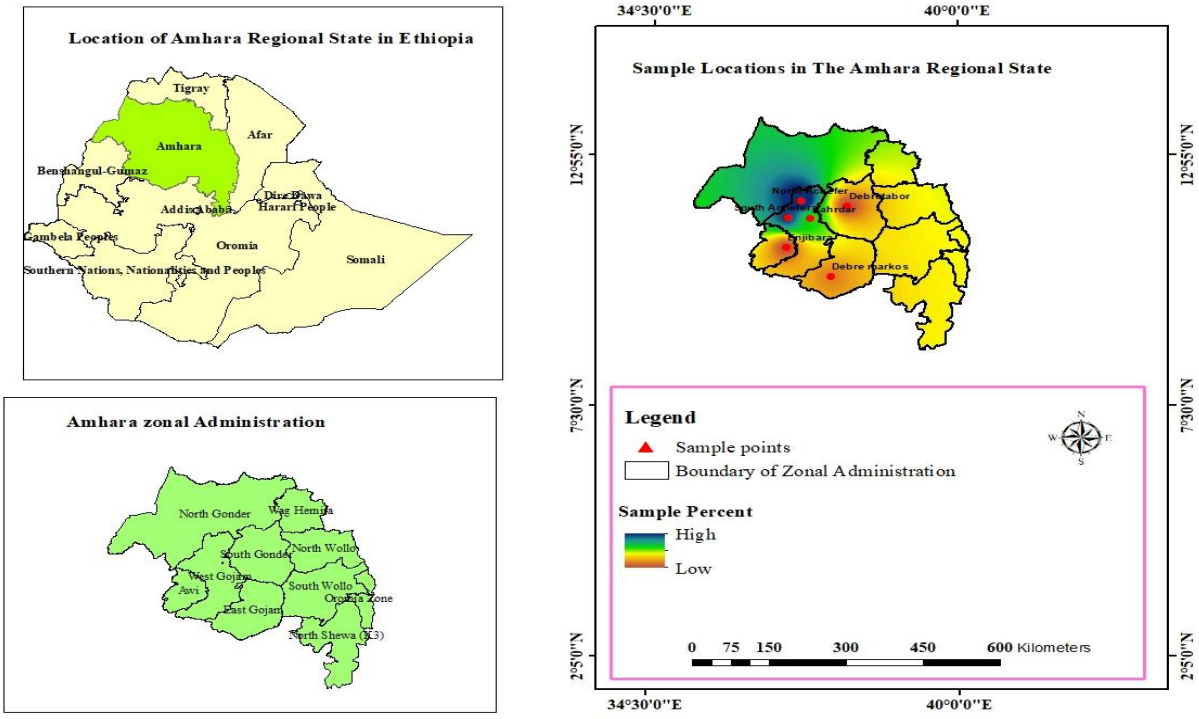


7.3.2. ALTITUDE OF SAME SAMPLE AREA OF ETHIOPIAN ATHLETES



The map shows the same sample altitude in Ethiopia, showing the location of the current Ethiopian athletes. They took part in this study, from the lowest altitude to the highest altitude area. Among 326 total sample size, 115 (35.3%) were from the Oromiya regional state of Ethiopia, 33 (10.1%) from the Amhara regional state, 89 (27.3%) from Addis Abeba, 61 (18.7%) from the South Nation Nationality and People regional state, including Sidama Regional state, 9 (2.8%) from Tigray Regional state, and 19 (5.83%) of the athletes were from the Benshangule Gumuze region. These were Ethiopia's contributions from all of its regional states as well as how the present Ethiopian athletes were distributed.

7.3.3. LOCATION OF AMHARA REGIONAL STATE IN ETHIOPIA

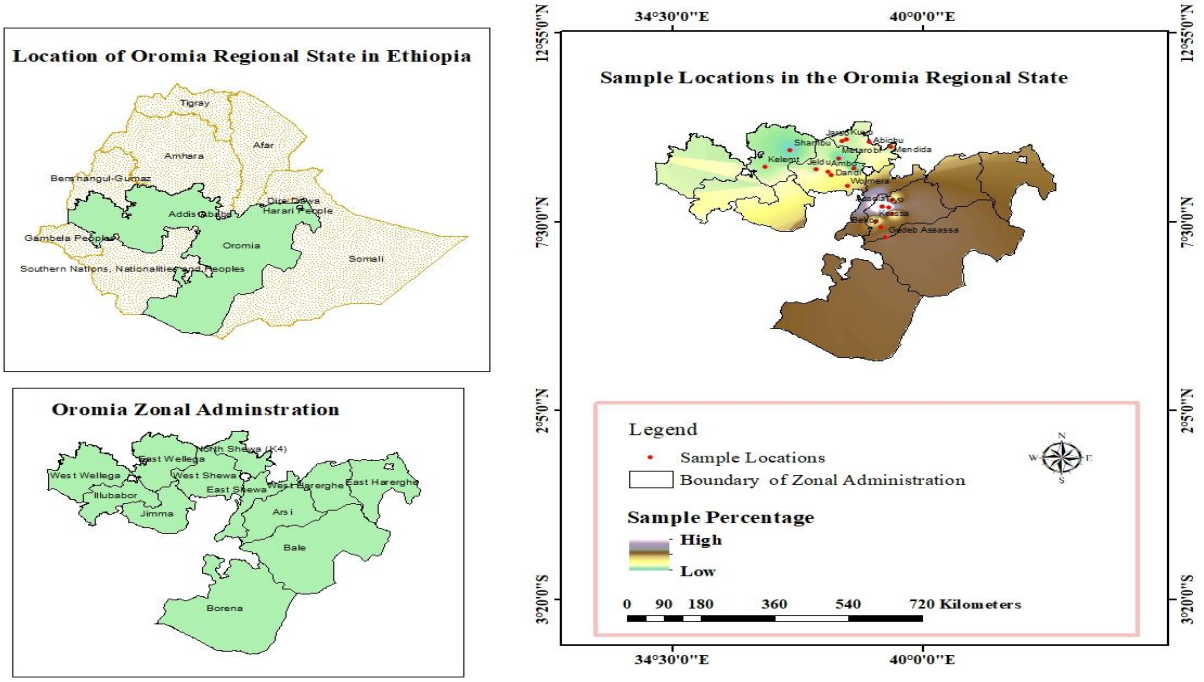


Thirty-three athletes from the Amara regional state's various athletic clubs, sports projects, and high-level long and middle-distance running competitions in Ethiopia made up the study's participant sample. These athletes also competed at the international and Olympic levels. The sample athletes included 11 athletes from North Achefer, 1866 meters above sea level, nine athletes from South Achefer, 2072 meters above sea level, six athletes from Bahir Dar, 1808 meters above sea level, three athletes from Debre Markos, 2411 meters above sea level, two athletes from Debre Tabor, 2706 meters above sea level, and two athletes from Enjibara, 2560 meters above sea level. This regional information was utilized to display the present zonal distribution of Ethiopian athletes as well as the contribution of the Amhara regional state to Ethiopia. 10.1% of the Ethiopian athletes who participated in this survey were from the Amhara regional state.

TABLE 21 AMHARA REGIONAL STATE SAMPLES

Regional state	Sample Zone	Longitude	Latitude	Altitude	Number of sample	Percentage
Amhara	Bahir Dar	11.57421	37.36153	1808	6	18
Amhara	Debre Markos	10.32963	37.7344	2411	3	9
Amhara	Debre Tabor	11.85	38.01667	2706	2	6
Amhara	Enjibara	10.95	36.933	2560	2	6
Amhara	North Achefer	11.96666	37.1666	1866	11	34
Amhara	South Achefer	11.6	36.95	2072	9	28
Total					33	100

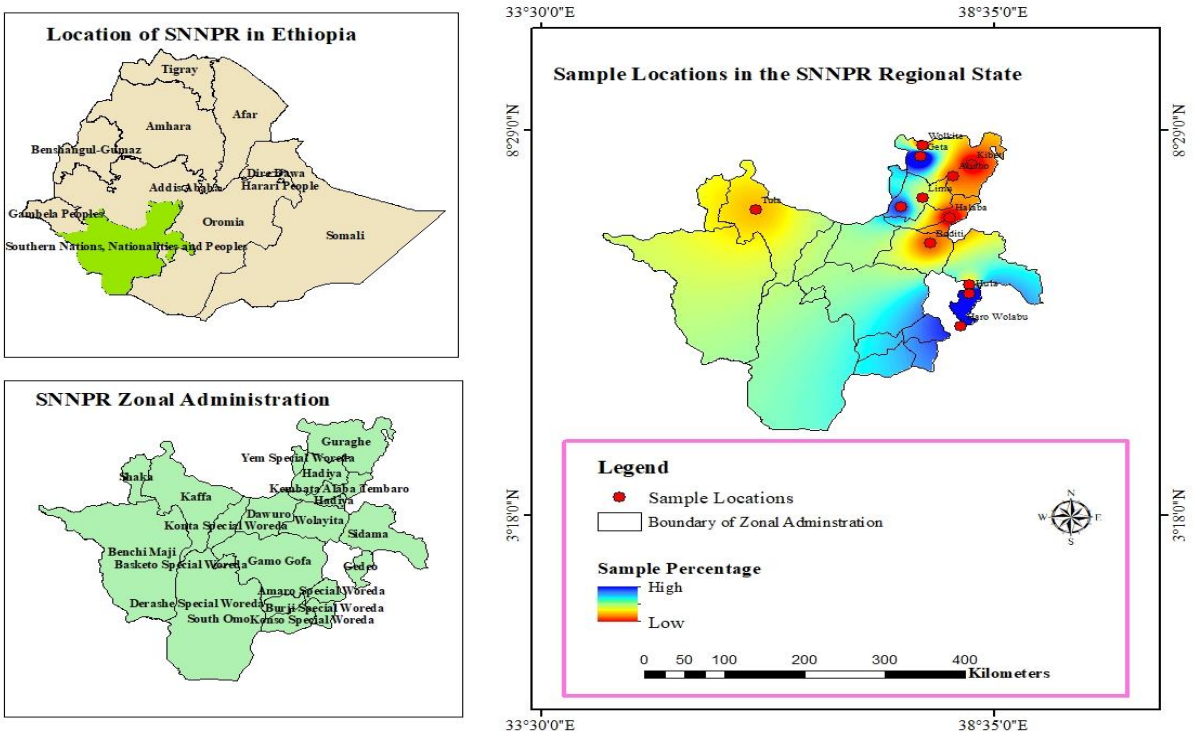
7.3.4. LOCATION OF OROMIA REGIONAL STATE IN ETHIOPIA



One hundred fifteen athletes (35.38 %) of the total contribution of the current Ethiopian athletes are from Oromiya regional state. The zonal distribution of Oromiya regional state athletes currently working in various athletics clubs, athletics projects, and competing in high-level long and middle-distance running competitions in Ethiopia. Among the total sample from Oromiya, 30 (9.2 %) of athletes were selected from Assela, that altitude of 2430 meters above sea level, 18 (5.5 %) were from Chilalo, 4036 meters above sea level, 10 (3.6%) were from Tiyo, 2430 meters above sea level, 9 (2.7 %) were from Gedeb Assassa, 2800 meters above sea level, 8 (2.5 %) were from Bekoji, 2810 meters above sea level, and 5 (1.3%) were This local information was utilized to display the present zonal distribution of Ethiopian athletes as well as the contribution

of the Oromiya regional state to the nation's athlete output. The Oromiya regional state provided a total of 35.38 % of the Ethiopian athletes that participated in this study.

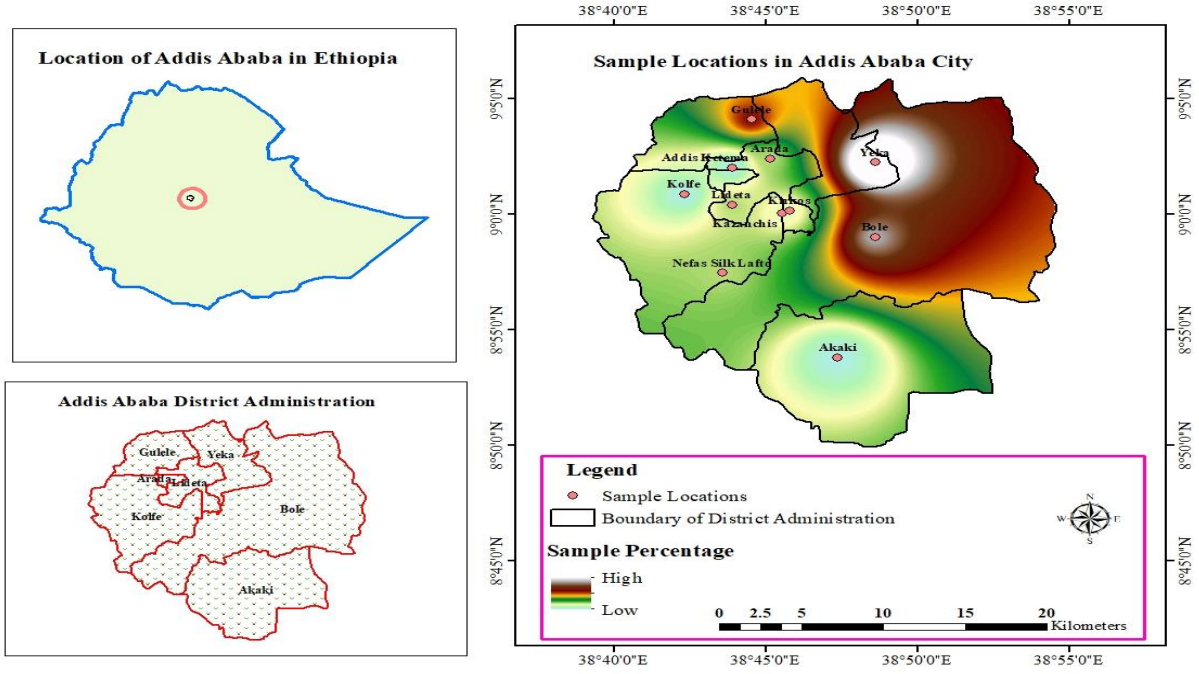
7.3.5. LOCATION OF SNNP REGIONAL STATE IN ETHIOPIA



61 (18.7%) of the total contribution of the current Ethiopian athletes are from the South Nation Nationality and People (SNNP) regional state. Athletes are currently employed in various athletics clubs, athletics projects, and competing at the international and Olympic levels in long and middle-distance running competitions in Ethiopia. This sample comprised the recently formed regional state split from SNNPR, the so-called Sidama zone. Among the SNNPR sample location of athletes, 12 (3.7%) of the sample were selected from Hulla, located at an altitude of 2850 meters above sea level, and 11 (3.38%) of the sample were collected from Geta woreda of Gurage Zone located at an altitude of 2810 meters, 7 (2.1%) of the sample were collected from Hagereselam Sidama, located at an altitude of 2850 meters above sea level, 7 (2.1%) of the sample were collected from Lera/Mugo of Silte Zone, at 2512, 6 (1.8 %) of athletes came from Alicho Wuriro, Boditi, and Dilla, each of the 2 athletes at an altitude of 2512, 2050, and 1570 meters above sea level sequentially, and the other 1 (0.3 %) of athletes came from Halaba Kulito

an altitude of 2070 above sea level, Wolkite, and Kibet each one athlete. The remaining athletes were from Limu Hadiya, Tulla Sidama, and Alicho. This regional information was utilized to display the present zonal distribution of Ethiopian athletes and the contribution of the South nation Nationalities and People Regional State to Ethiopia. 18.7% of the Ethiopian athletes who participated in this survey were from the SNNP regional state.

7.3.6. LOCATION OF ADDIS ABABA CITY ADMINISTRATION



89 (27.3 %) of the total contribution of the current Ethiopian athletes were included in the Addis Ababa City administration distribution based on sub-city administration level athletes who are currently employed in various athletics clubs, athletics projects, and competing in high level long and middle distance running competition in Ethiopia. 26 (8%) of the athletes in this sample were from the Yeka sub-city, which is located at an altitude of 2587 metres above sea level, and 16% (4.9%) were from Koteb in Yeka. Sub-City of Yeka, 42 athletes (13% of the total) came from a location 2587 meters above sea level, 15 athletes (4.6%) came from Bole Sub-City, 2324 meters above sea level, and 10 athletes (3.1%) came from Gulele Sub-City, 2688 meters above sea level. 12 athletes, or 3.7 %, were from Arada, Lideta, and Nifas Silk. Lafto Sub-City had altitudes of 2436, 2362, and 2224 meters above sea level sequentially, and each of its four athletes came

from there. Six athletes (1.8 %) came from Kirkos Sub-City, which had an altitude of 2332 meters above sea level, and four athletes (1.2 %) came from Adis Ketema, Akaki, Kolfe, and Abado, each of which had one athlete and altitudes of 2294, 2125, 2551 This local data was used to illustrate the distribution of current Ethiopian athletes in the Addis Ababa City Sub-City and their contribution to Ethiopia. The Addis Ababa City Administration provided 89 (27.3 %) of the Ethiopian athletes that participated in this study.

7.3.7. TIGRAY REGIONAL STATE

The study's participant sample included 9 (2.7 %) of the total number of current Ethiopian athletes from the Tigray regional state who are currently working for various athletics clubs and projects and competing at the international and Olympic levels in long and middle distance running in Ethiopia. Because of the issue of the ongoing military confrontations between the Ethiopian army and the Tigray liberation front group, it was challenging to gather the necessary data from that particular location, and this sample population is not indicative of the Tigray regional state of Ethiopia. Some of the study participants were residing in Addis Abeba during the data collection. Among the athletes in the sample, 5 (1.5%) were from Mekele City, which is 2254 meters above sea level, 4 (1.2%) were from Adi Haki, which is 2084 meters above sea level, and 1 (0.3%) were from Hagereselam Tigray, which is 2631 meters above sea level. Due to the ongoing conflict and the area's status as a war zone, the genuine indicator of Tigray data was not collected. This regional data was utilized to illustrate the current zonal distribution of Ethiopian athletes and the contribution Tigray regional state made to Ethiopia.

7.3.8. BENISHANGUL GUMUZ REGIONAL STATE

Located in western Ethiopia, the Benshangul Gumuz regional state shares borders with Sudan, Amhara, and Oromiya. The study's participant sample included 19 (5.8%) of the total number of current Ethiopian athletes from the Benshangul Gumuz regional state who are currently working for various athletics clubs, athletics projects, and competing at the international and Olympic levels in long and middle distance running competition in Ethiopia. This regional data was used to show the current zonal distribution of Ethiopian athletes and the contribution of the Benshangul Gumuz regional state to Ethiopia, but unfortunately the data collected from athletes

who were from Debrezeyite of the Benshangul Gumuz regional state. Of the sample athletes, 19 (5.8%) athletes were from Wonbera Debrezeyit, which is located at an altitude of 2135 metres above sea level.

7.3.9. THE CURRENT ETHIOPIAN ATHLETES' LOCATIONAL DATA

The following table included the demographic information of current Ethiopian athletes who have competed in various long and middle-distance running events both domestically and abroad. Some of these athletes are also currently enrolled as students in various athletics clubs, projects, and sport academies.

According to the sample location indicators of longitude, latitude, and altitude/elevation of the current Ethiopian athletes, where they were raised, the table data revealed the demographic breakdown of Ethiopian athletes.

Regional State	Sample location	Latitude	Longitude	Elevation in Meter	Frequency	Percent	Valid Percent	Cumulative Percent
Addis Ababa	Addis Ketema	9.3391	38.7253	2294	1	0.3	0.3	0.3
Addis Ababa	Akaki	8.8964	38.7891	2125	1	0.3	0.3	0.6
Addis Ababa	Arada	9.036	38.7523	2436	4	1.2	1.2	1.8
Addis Ababa	Bole	8.976944	38.8	2324	15	4.6	4.6	6.4
Addis Ababa	Entoto	9.115556	38.7722	3,200	1	0.3	0.3	6.7
Addis Ababa	Gulele	9.068092	38.7420	2688	10	3.1	3.1	9.8
Addis Ababa	Janmeda	9.083	38.834	2587	3	0.9	0.9	10.7
Addis Ababa	Kazanchis	9.0003	38.7591	2332	3	0.9	0.9	11.6
Addis Ababa	Kirkos	9.0003	38.7591	2332	3	0.9	0.9	12.5
Addis Ababa	Kolfe	8.95118	38.6875	2551	1	0.3	0.3	12.8
Addis Ababa	Kotebe	9.083	38.834	2587	16	4.9	4.9	17.7
Addis Ababa	Lideta	9.0036	38.7261	2362	4	1.2	1.2	18.9
Addis Ababa	Nefas Silk Lafto	8.9481701	38.7327	2224	4	1.2	1.2	20.1
Addis Ababa	Yeka	8.083	38.834	2587	23	7.1	7.1	27.2
Amhara	Bahir Dar	11.574208	37.3615	1808	6	1.9	1.9	29.1
Amhara	Debre Markos	10.329634	37.7344	2411	3	0.9	0.9	30.0
Amhara	Debre Tabor	11.85	38.0166	2706	2	0.6	0.6	30.6
Amhara	Enjibara	10.95	36.933	2560	2	0.6	0.6	31.2
Amhara	North Achefer	11.96666	37.1666	1866	11	3.4	3.4	34.6
Amhara	South Achefer	11.6	36.95	2072	9	2.8	2.8	37.4
Benshangul Gumuz	Wonbera Debrezeyt	10.5	35.4167	2135	19	5.8	5.8	43.2
Oromya	Abichu	9.8167	38.85	2738	3	0.9	0.9	44.1
Oromya	Ambo	8.9580605	37.9321	2101	4	1.2	1.2	45.3
Oromya	Assela	7.95	39.117	2,430	30	9.2	9.2	54.5
Oromya	Bekoji	7.35	39.1	2810	8	2.5	2.5	57.0
Oromya	Chilalo	7.916666	39.2666	4,036	18	5.5	5.5	62.5
Oromya	Dandi	8.842777	38.0113	3260	5	1.5	1.5	64.0
Oromya	Digalu	7.74	39.35	3136	1	0.3	0.3	64.3
Oromya	Gedeb Assassa	7.06	39.2	2810	9	2.8	2.8	67.1
Oromya	Holeta	9.05	38.5	2391	1	0.3	0.3	67.4
Oromya	Huruta	8.15	39.35	2,700	2	0.6	0.6	68.0
Oromya	Jarso	9.833	38.25	2383	3	0.9	0.9	68.9
Oromya	Jeldu	9.0167	37.6666	2096	2	0.6	0.6	69.5
Oromya	Kelemt	9.083	36.55	2088	2	0.6	0.6	70.1
Oromya	Kerssa	7.53	38.983	2784	3	0.9	0.9	71.0
Oromya	Kuyu	9.8667	38.35	2557	2	0.6	0.6	71.6
Oromya	Legedadi	9.08333	38.9167	2450	1	0.3	0.3	71.9
Oromya	Legetafo	9.093333	38.8655	2460	3	0.9	0.9	72.8
Oromya	Mendida	9.6569	39.3164	2812	2	0.6	0.6	73.4
Oromya	Metarobi	9.3333	38.1667	2473	1	0.3	0.3	73.7
Oromya	Shambu	9.5666667	37.1	2503	1	0.3	0.3	74.0

Oromya	Tiyo	7.94	39.13	2490	10	3.1	3.1	77.1
Oromya	Wolmera	8.54	38.36	3191	5	1.5	1.5	78.6
SNNPR	Alicho	7.87	38.13	2512	2	0.6	0.6	79.2
SNNPR	Boditi	6.96666	37.8666	2050	2	0.6	0.6	79.8
SNNPR	Dilla	6.4105	38.3102	1570	2	0.6	0.6	80.4
SNNPR	Geta	8.1333	37.7667	2810	11	3.4	3.4	83.8
SNNPR	Hagereselam	6.29	38.31	2850	7	2.2	2.2	86.0
SNNPR	Halaba	7.3127	38.088	2078	1	0.3	0.3	86.3
SNNPR	Haro Wolabu	5.8405556	38.2133	2993	7	2.2	2.2	88.5
SNNPR	Kibet	8.02	38.33	2108	1	0.3	0.3	88.8
SNNPR	Lera/Mugo	7.44877	37.5414	3100	7	2.2	2.2	91.0
SNNPR	Limu	7.57	37.79	2188	4	1.2	1.2	92.2
SNNPR	Wolkite	8.2833	37.7833	1935	1	0.3	0.3	92.5
SNNPR	Hula	6.29	38.31	2850	12	3.8	3.8	96.3
SNNPR	Tula	7.4166	35.9166	1980	3	0.9	0.9	97.2
Tigray	Adi Haki	13.4833	39.4667	2084	3	0.9	0.9	98.1
Tigray	Hagere Selam Tigray	13.650295	39.1725	2,631	1	0.3	0.3	98.4
Tigray	Mekele	13.49355	39.4657	2254	5	1.6	1.6	100

Table 22: *the sample demographic data of Ethiopian athletes*

Since the 1956 Olympics, Ethiopia has participated in Olympic sport without winning a medal, and since the 1960 Rome Olympics, Ethiopia has dominated long and middle distance running in Olympic competitions as well as other sorts of competition. Ethiopian long-distance runners have been dominating long and middle-distance competitions that have been held in several continental locations and with varying weather conditions, Wishnizer et al. (2013),Scott et al.(2003) Ethiopia has competed in 14 Olympic competitions since 1956 and has won 58 Olympic medals since 1960 in the running disciplines of the marathon, 10,000 m, 5000 m, 3,000 m steeplechase, and 1500 m. Ethiopia has won 23 gold, 12 silver, and 23 bronze Olympic medals during its participation in the games.

Ethiopia is recognized as the best country in the world, despite being at the pinnacle of long- and medium-distance racing on the international scene. The country's success thus far has been attributed to the athletes' individual efforts rather than to sophisticated training methods and infrastructure. This research work has assessed the present athletic performance of Ethiopian athletes to demonstrate that it is the athletes' individual effort, not the assistance of contemporary training and infrastructure. It is thought that the Ethiopian economy would have benefited more

from athletic sport if it had been supported earlier by contemporary facilities and training, as well as the current beginnings.

Different researchers claimed that almost all elite Ethiopian athletes only came from high altitude regions above 2500 meters above sea level; however, the findings of this study contradicted the earlier assumption that Ethiopian athletes are distributed differently depending on location and altitude. The following table includes the athletes' birthplace, name altitude, and the altitude of the host country to compare the effect of altitude on performance and the distribution of Ethiopian athletes based on their place of birth. The current study result and distribution of Ethiopian Olympic team participants and winners' athletes were coming from more than eight regional states of Ethiopia.

7.3.10. ETHIOPIAN ATHLETES' OLYMPIC SUCCESS, COMPETITION AREA ALTITUDE AND BIRTH PLACE ALTITUDE

No.	Year	Host country	Competition Altitude	Name of athlete	Birth Place Altitude	Types of Event	Result	Place of Birth
1	1960	Rome	13m	Abebe Bikila	2,355m	Marathon	Gold	Shewa
2	1964	Tokyo	40m	Abebe Bikila	2,355m	Marathon	Gold	Shewa
3	1968	Mexico	2,240m	Mamo Wolde	1720	Marathon	Gold	Ada`a
4	1968	Mexico	2,240m	Mamo Wolde	1920m	10,000m.	Silver	Ada`a
5	1972	Munich	520m	Mamo Wolde	1920	Marathon	Bronze	Ada`a
6	1972	Munich	520m	Miruts Yifter	2346m	10,000m	Bronze	Adigrat
7	1980	Moscow	156m	Miruts Yifter	2346m	10,000m	Gold	Adigrat
8	1980	Moscow	156m	Miruts Yifter	2346m	5,000	Gold	Adigrat
9	1980	Moscow	156m	Mohamed Kedir		10,000m	Bronze	
10	1980	Moscow	156m	Eshetu Tura	1120m	3,000 Stpc	Bronze	Pawe
11	1992	Barcelona	12m	Derartu Tulu	2810m	10,000m	Gold	Bekoji
12	1992	Barcelona	12m	Adis Abebe	1382m	10,000m	Bronze	Raya
13	1992	Barcelona	12m	Fita Bayisa	2101m	5,000m	Bronze	Ambo
14	1996	Atlanta	320m	Haile Gebresilasie		10,000m OR	Gold	Assela
15	1996	Atlanta	320m	Fatuma Roba	2810m	10,000	Gold	Bekoji
16	1996	Atlanta	320m	Gete Wami	2840m	10, 000	Gold	Debrebrihan
17	2000	Sydney	80m	Gezahegne Abera	2215m	Marathon	Gold	Eteya
18	2000	Sydney	80m	Haile Gebresilasie		10,000	Gold	Assela
19	2000	Sydney	80m	Derartu Tulu	2810m	10,000 OR		Bekoji

20	2000	Sydney	80m	MIlion Welde	2355m	5,000	Gold	Addis Ababa
21	2000	Sydney	80m	Gete Wami	2810m	10,000	Silver	Bekoji
22	2000	Sydney	80m	Assefa Mezgebu	2200m	10,000	Bronze	Sidama
23	2000	Sydney	80m	Tesfaye tola		Marathon	Bronze	
24	2000	Sydney	80m	Gete Wami	2810m	5,000	Bronze	Bekoji
25	2004	Athens	194m	Kenenisa Bekele	2810m	10,000m	Gold	Bekoji
26	2004	Athens	194m	Meseret Defar	2355m	5,000m	Gold	Addis Ababa
27	2004	Athens	194m	Kenenisa bekele	2810m	5,000m	Silver	Bekoji
28	2004	Athens	194m	Ejigayehu Dibaba	2810m	10,000m	Silver	Bekoji
29	2004	Athens	194m	Sileshi Sihine	2918m	10,000m	Silver	Sheno
30	2004	Athens	194m	Tirunesh Dibaba	2810m	5,000m	Bronze	Bekoji
31	2004	Athens	194m	Derartu Tulu	2810m	10,000m	Bronze	Bekoji
32	2008	Beijing	44m	Kenenisa bekele	2810m	10,000m OR	Gold	Bekoji
33	2008	Beijing	44m	Kenenisa bekele	2810m	5,000m OR	Gold	Bekoji
34	2008	Beijing	44m	Tirunesh Dibaba	2810m	10,000m OR	Gold	Bekoji
35	2008	Beijing	44m	Tirunesh Dibaba	2810m	5,000m	Gold	Bekoji
36	2008	Beijing	44m	Sileshi Sihine	2918m	10,000m	Silver	Sheno
37	2008	Beijing	44m	Meseret Defar	2355m	5,000m	Silver	Addis Ababa
38	2008	Beijing	44m	Tsegaye Kebede	2670m	Marathon	Bronze	GirarBer/AA
39	2012	London	11m	Meseret Defar	2355m	5,000m	Gold	Addis Ababa
40	2012	London	11m	Tirunesh Dibaba	2810m	10000m	Gold	Bekoji
41	2012	London	11m	Tiki Gelana	1934	Marathon OR	Gold	Jigjiga
42	2012	London	11m	Dejen Gebremeskel	2457m	5,000m	Silver	Adigrat
43	2012	London	11m	Sofia Assefa	2355m	3,000m Stpc		Addis Ababa
44	2012	London	11m	Tariku Bekele	2810	10,000m	Bronze	Bekoji
45	2012	London	11m	Tirunesh Dibaba	2810	5,000m	Broze	Bekoji
46	2012	London	11m	Abeba Aregawi	2457m	1,500m	Bronze	Adigrat
47	2016	Rio De J.	33m	Almaz Ayana	2097m	10,000	Gold	Benshangul
48	2016	Rio De J.	33m	Genzebe Dibaba	2810m	5,000	Silver	Bekoji
49	2016	Rio De J.	33m	Feyisa Lelisa	2096m	Marathon	Silver	Jeldu
50	2016	Rio De J.	33m	Tamirat Tola		10,000m	Bronze	
51	2016	Rio De J.	33m	Mare Dibaba	2810m	Marathon	Bronze	Bekoji
52	2016	Rio De J.	33m	Almaz Ayana	2097	5,000m	Bronze	Benshangul
53	2016	Rio De J.	33m	Hagos Gebrehiwet	1560m	5,000m	Bronze	Tsa`da Imba
54	2016	Rio De J.	33m	Tirunesh Dibaba	2810m	10,000m	Bronze	Bekoji
55	2020	Tokyo	40m	Solomon Barega	2700m	10,000	Gold	Geta/Bitara
56	2020	Tokyo	40m	Lemecha Girma	2430m	3,000m Stpc	Silver	Assela

57	2020	Tokyo	40m	Gudaf Tsegaye	2254	5,000m	Bronze	Tigray
58	2020	Tokyo	40m	Letesenbet Gidey	2254	10,000m	Bronze	Tigray
59	2020	Tokyo	40m	Sifan Hassen Eth/ For Netherland	1712m	10,000	Gold	Adama
60	2020	Tokyo	40m	Kalkidan Gezahegn Eth/ for Bahrain	2355m	10,000m	Silver	Addis Ababa

Table 23: *Ethiopian Olympic medalist success related data*

7.3.11. ETHIOPIAN OLYMPIC MEDALIST TRAINING AND LIVING PLACE LOCATION

No.	Athletes specific area /CITY/	Number of athletes	Number of medal	Valid percent	Cumulative percent %
1	Adama	1	1	2.7	2.7
2	Addis Ababa	5	9	13.3	16.
3	Adigrat	3	5	8.3	24.3
4	Ambo	1	1	2.7	27.0
5	Assela /Eteya	3	5	8.1	35.1
6	Bekoji	9	18	24	59.1
7	Bishoftu Ada`a	2	4	5.4	64.5
8	Debrebirhan	1	1	2.7	67.2
9	Gigjiga	1	1	2.7	69.9
10	Gurage	1	1	2.7	72.6
11	Jeldu	1	1	2.7	75.3
12	Mekele	3	3	8.3	83.6
13	Pawe	1	1	2.7	86.3
14	Raya	1	1	2.7	89.0
15	Shewa	2	3	5.6	94.4
16	Sheno	1	1	2.7	97.3
17	Sidama	1	1	2.7	100

Table 24: *Ethiopian Olympic medalist training and living place location data*

Table 24 shows the training and living altitudes of Ethiopian Olympic medalists and winners. It shows that 24% of medalists hail from the Bekoji region, in a region similar to Oromia, 19% of Olympic winners hail from the Tigray regional state, specifically Adigrat and Mekele. The distribution of Ethiopian athletes around the nation was illustrated in the above table, along with a determination of all regions of Ethiopia are suitable for the construction of projects for athletic training. Oromya was a regional state that contributed more as a result of Ethiopia's regional states. Table 3 shows the training and living altitudes of Ethiopian Olympic medalists and winners. It shows that 24% of medalists hail from the Bekoji region, where the majority of

Ethiopian athletes look up to. In a region similar to this, 19% of Olympic winners hail from the Tigray regional state, specifically Adigrat and Mekele. The distribution of Ethiopian athletes around the nation was illustrated in the above table, along with a determination of all regions of Ethiopia are suitable for the construction of projects for athletic training. Oromya was a regional state that contributed more as a result of Ethiopia's regional states.

7.4. RESULT AND DISCUSSION

7.4.1. RESULT

This study's findings were put together using the study's data organization components. The current Ethiopian athletes who compete in various long and middle-distance running events both domestically and abroad were included in the demographic data on the table. Some of these athletes are currently enrolled in various athletics clubs, projects, and sport academies and come from various regional states and altitudes within Ethiopia. The current lowest, medium and highest altitudes for Ethiopian athletes are respectively 1519 and 1570 meters above sea level, 2001 and 2130 meters above sea level, and 2500 and 4036 meters above sea level. The 326 total sample locations showed that the current distribution of Ethiopian athletes by altitude was different, with athletes from nearly eight different regional states participating in this study, various long and middle-distance races in Ethiopia, as well as various international competitions, including Olympic games.

There is no ethnic majority in any region or state in Ethiopia, and the present generation of Ethiopian athletes do not all belong to the same ethnic group. Since the 1960 Rome Olympics, Ethiopian athletes have won medals at every Olympic Games. The birthplace altitudes of the present Ethiopian athletes range from 1500 meters to 4036 meters above sea level. Except for the Mexico Olympics, almost all Olympic competitions were conducted at low altitudes, between 11 and 520 meters above sea level. All of Ethiopia's Olympic medal-winning athletes hail from high altitude regions, and since all contests were held on low land, long distance running was the event in which their training at high altitude had any chance of success.

This research work has assessed the present athletic performance of Ethiopian athletes to demonstrate that it is the athletes' individual effort, not the assistance of contemporary training and infrastructure. It is thought that the Ethiopian economy would have benefited more from

athletic sport if it had been supported earlier by contemporary facilities and training and the current beginnings.

7.4.2. CONCLUSION

In addition to other document analyses, this study included 326 Ethiopian athletes who directly participated in altitude-related factors and 83 high-level athletes who participated in variables connected to Ethiopian athletes' running success. Middle and long-distance running has historically been successful in several parts of the world. Even yet, it seems unlikely that being an East African middle or long-distance runner gives one a genetic or physiological edge, and it is more likely that there are other factors contributing to their success.

According to this study's findings, the success of Ethiopian long and middle-distance runners motivates the athletes to solve their financial issues and reach their financial objectives. The athletes' great desire was sparked by the example set by their long and middle-distance running competition participation-solving role models. In terms of global long-distance running results, the Arisi tribe and the Kallenjian tribes are found in the east African nations of Ethiopia and Kenya, respectively (Onywera et al., 2006; Dr.S.Jayaraman, 2016; R L Wilber & Ptsiladis, 2012).

According to studies, nearly all of Ethiopia's elite athletes are from high-altitude regions, notably those located above 2500 meters above sea level. However, the distribution of Ethiopian athletes depending on geography and altitude did not match the findings of the previous study, which was different from the assumption made above. The current study's findings and distribution of Ethiopian athletes, who represent more than eight regional states in Ethiopia, are shown in a table, with a graph showing elevations ranging from 1500 meters to 4036 meters above sea level for sample locations. According to the data from this study's findings, Ethiopian athletes did not all hail from the same region or altitude. Since 1960, Ethiopian athletes have won 58 medals at the Olympics, with 23 of those being gold, 12 silver, and 23 bronze. The athletes were born in several regional states of Ethiopia, and table's description of their altitude ranges from 1500 meters to 4036 meters above sea level.

The birthplace altitudes of the present Ethiopian athletes range from 1500 meters to 4036 meters above sea level. The distribution of altitude for these Ethiopian athletes is not unusual for other

nations in Africa or the rest of the world. All nations in the world with locations close to the aforementioned height have an identical likelihood of experiencing long and middle-distance running success. Along with this altitude-related query, Ethiopian long and middle-distance runners who entered official running training while having a poor socioeconomic standing also encountered an economic challenge during training, which they had to overcome. Ethiopian long and middle-distance runners were developed to have a strong desire to overcome economic hardship through athletics, as economic hardship can push Ethiopian runners to achieve high levels of performance.

Except for the Mexico Olympics, almost all Olympic competitions were conducted at low altitudes, between 11 and 520 meters above sea level. All of Ethiopia's Olympic medalists hail from high altitude regions, and since all of the competitions were held on low land, long distance running was the only event in which they had a chance to prevail over other throwing and jumping competitions. This is because the low land areas present a greater challenge for throwing and jumping competitions involving the force of gravity. When the height is higher, the earth's gravitational pull is weaker; when the altitude is lower, the pull of the earth's gravity is stronger. Based on this, athletes perform better while practicing for throwing and jumping events at low altitude.

Ethiopia is considered as the best country in the world for long and medium-distance racing training, and the country's achievements thus far have been attributed to the athletes' individual efforts rather than to sophisticated training methods and infrastructure. This research work has assessed the present athletic performance of Ethiopian athletes to demonstrate that it is the athletes' individual effort, not the assistance of contemporary training and infrastructure. It is thought that the Ethiopian economy would have benefited more from athletic sport if it had been supported earlier by contemporary facilities and training, as well as the current beginnings.

The majority of Ethiopian elite athletes, according to various researchers, are only from high altitude regions above 2500 meters above sea level. However, this study's findings contradicted the earlier researchers' assumptions that Ethiopian athletes are distributed differently depending on location and altitude. In order to compare the impact of altitude on performance and the distribution of Ethiopian athletes based on their place of birth, the current study's findings and

the distribution of Olympic team members and winners came from more than eight regional states of Ethiopia.

Last but not least, the research would like to suggest that the study on the article of Ethiopian athletes' success with altitudinal variations, athletes' distribution, and regional states' contributions on to athletes production related research shown as there was a different assumption of the previous study results and the current Ethiopian elite athletes and other the footsteps athletes' altitudinal distribution was varied, their training infrastructure was so poor, and their training methods were not as effective as they could be. However, they have lower elevations than Ethiopian athletes have in every competition area across the world, which allows them to live high and train low, which is a key factor in their success.

The training area and competitive area should be adjusted in light of this. All athletes have an equal chance of success in competition and training at high altitudes, but Ethiopian and east African athletes excelled there, such as at the 2240 meter above sea level Mexico Olympic Games, thanks to other variations of Ethiopian athletes related to socioeconomic status, motivation to solve their financial problems, and the influence of their role models. If Ethiopian athletics had previously benefited from contemporary instruction, the application of scientific methodology, infrastructure, and the current beginnings were improved and applied, it is thought that the Ethiopian economy would have been better supported by athletic sport and the running dominancy will be improved throughout the world competition.

Therefore, the organization that oversees international athletics should give the competition area and training area considerably more thought. Based on this research's findings that almost all Ethiopian altitudes are very suitable for producing long and middle-distance runners, the Ethiopian Athletics Federation and Sport Commission should carefully consider their athletics training and project plans. This is because all of the world's largest cities were constructed at lower altitudes than those listed in the table above, which has shown us that Ethiopian long-distance runners benefit from their living and growing environment.

Based on the findings of this study, the Ethiopian Athletics Federation and Sport Commission can disperse athletics projects throughout the nation to support citizen economic development and sport industry growth. The Ethiopian government could increase its economic growth if it

put a lot of attention into the sport of athletics. Because long distance running in Ethiopia doesn't require advanced equipment, instead, Ethiopian long and middle-distance runners' success serves as inspiration for them to solve their financial issues and accomplish their economic goals. The athletes' great desire was sparked by the example set by their long and middle-distance running competition participation-solving role models.

8. ETHIOPIAN ATHLETES' CONTRIBUTION ON ECONOMIC GROWTH

8.1. OBJECTIVE

The basic goal of the research, which is that Ethiopian long and middle-distance runners contribute to the country's economic prosperity, served as the basis for the specific objectives of this study. Based on this, the study's more focused aims would have looked into:-

- Evaluate investment participation of Ethiopian long and middle-distance runners and their impact on the country's economic growth.
- Investigate Ethiopian long and middle-distance running athletes' contribution to Ethiopian economic growth.
- Assess Ethiopian long and middle-distance athletes' participation in different investment sectors.
- Sow Ethiopian long and middle-distance running elite athletes' contribution to their country by overcoming the shortage of foreign currency.
- Investigate Ethiopian government support for long and middle-distance running sports and athletes.
- Assess Ethiopian middle and long-distance running athletes' investment sectors' contribution to the society.
- Used for the frame of reference to other investigators.

8.1.1. ITEMS AND CODES

The following questions were forwarded to the respondent and coded for SPSS data analysis and interpretation to this manuscript as follows;

NO.	ITEM CODE	ITEM	NO. OF RES.
1	A	Ethiopian long and middle-distance runners participating in different investment sectors in the Ethiopian economy	166
2	B	The source of ELMD runners` initial capital for their investments and business activities is related to their LMD running sport participation.	166
3	C	Athletics sport has significant economic change on Ethiopian athletes' life and their families	166
4	D	LMD running` has significant economic change on the Ethiopian economy	166
5	E	ELMD runners have significant economic change on the Ethiopian economy.	166
6	F	ELMD running athletes support their country with foreign currency through their running rewards.	166
7	G	ELMD runners support their country through reward taxes.	166
8	H	Ethiopian Athletics Federation and Sports Offices are beneficial to Ethiopian athletics sport.	166
9	I	ELMD running athletes' investment participation has been contributing to Ethiopian economic growth.	166
10	J	Ethiopian athletes significantly change their economic status before and after athletics sport participation.	166
11	K	Ethiopian athletes have significantly contributed to decreasing the unemployment rate in Ethiopia.	166
12	L	Ethiopian athletes have investment encouragement from the government.	166
13	M	Ethiopia is directly beneficial through Ethiopian athletes' rewards.	166

Table 25:*ITEMS AND ITS CODE*

ELMD= *Ethiopian Long and Middle Distance Running*
LMD= *Long and Middle Distance Running*

8.2. RESEARCH DESIGN

Mixed method research designs were employed in the study. When a researcher wishes to examine the complicated family structure, they can analyze qualitative and quantitative data in a single study using a mixed-methods research design, which has its advantages. In a single study or set of studies, mixed-method research focuses on gathering, analyzing, and combining both quantitative and qualitative data.

8.3. RESEARCH METHOD

The researcher employed the Convergent Parallel research method on the mixed-method research design derived from the mixed design. This method was used to capture two independent strands of quantitative and qualitative data simultaneously/in a single phase, to evaluate the data independently, and to combine the results during the overall interpretation to gain a more comprehensive picture of the study problem. In order to produce meaningful results, the quantitative data analysis was combined with the qualitative data analysis using the nonparametric test method, more specifically the Kruskal-Wallis test analysis method. The nonparametric test method was necessary because the data distribution was not normal, making it impossible to use the parametric test method.

8.4. RESULT AND DISCUSSION

The sample for this study included 50 athletes who were based in investment suites and 166 respondents who were divided into two groups: 83 athletes who had competed at the highest levels of international long-distance athletics competitions and 83 sports professionals who worked as personal coaches for athletes, Olympic team coaches, national team coaches, sport commission officials, and athletics federation professionals. 13 items were examined in this result section.

Athletes and coaches made up the response groups, and the items were classified in alphabetical sequence from A to K. Sports professionals, sports referees, athletics federation officials, and sports commission officials were all assigned to the coaches group as a single group. According to the results of the Kruskal-Wallis H test based on the data analysis table below, there is no significant difference between the groups if the obtained H value is less than the value of the table results in the critical table of (X^2). If the obtained H value is equal to or greater than that value, there is a significant difference between the groups. Descriptive statistical data is essential to evaluate the data and determine how the item response appears. The tables below are divided into two portions for data visibility; A to G are in one table, while H to M are in another table. This was done to keep the tables' sizes small.

8.4.1. DESCRIPTIVE STATISTIC 1

ITEM CODE	N	MEAN	STD. DEVIATION	MINIMUM	MAXIMUM
A	166	4.51	.776	1	5
B	166	3.41	1.344	1	5
C	166	4.33	.937	1	5
D	166	4.11	1.047	1	5
E	166	4.25	.977	1	5
F	166	4.02	1.183	1	5
G	166	4.52	.822	1	5

Table 26: ***Descriptive statistics 1***

8.4.2. DESCRIPTIVE STATISTIC 2

ITEM CODE	N	MEAN	STD. DEVIATION	MINIMUM	MAXIMUM
H	166	4.26	.940	1	5
I	166	3.58	1.285	1	5
J	166	3.90	1.104	1	5
K	166	3.67	1.266	1	5
L	166	3.46	1.378	1	5
M	166	4.37	.869	1	5
RESPONDENTS	166	1.50	.502	1	2

Table 27: Descriptive statistics 2

The data analysis demonstrated Ethiopian athletes' contributions to the nation's economic development in relation to athletes` various economic participation in the Ethiopian economy. To keep it concise and precise, the two respondent groups' responses to the linked item were: "Ethiopian long and middle distance runners' involvement in different investment sectors on Ethiopian economy descriptive result based on the two groups of respondent mean M±SD = 4.51±0.776," The source of ELMD runners` initial capital of their investments and business activities is related with their LMD running sport participation = $3.41 \pm 1.344$, Athletics sport has significant economic change on Ethiopian athletes' life and their families$M \pm SD = 4.33 \pm 0.937$, LMD running` has significant economic change on Ethiopian economy $M \pm SD =$

4.11 ± 1.047, ELMD runners have significant economic change on Ethiopian economy $M \pm SD = 4.25 \pm 0.977$, ELMD running athletes support their country with foreign currency through their running rewards $M \pm SD = 4.02 \pm 1.183$, ELMD runners support their country through reward taxes $M \pm SD = 4.52 \pm 0.822$. Ethiopian Athletics Federation and Sports Offices are beneficial with Ethiopian athletics sport. ($= M \pm SD = 4.26 \pm 0.940$)

Ethiopian long and middle-distance athletes' investment participation has contributed to Ethiopian economic growth. ($= M \pm SD = 3.58 \pm 1.285$)

Ethiopian athletes have a significant change on their economic status before and after athletics sport participation. ($= M \pm SD = 3.90 \pm 1.104$)

Ethiopian athletes' have a significant contribution to decreasing the unemployment rate in Ethiopia ($= M \pm SD = 3.67 \pm 1.266$)

Ethiopian athletes have investment encouragement from the government ($= M \pm SD = 3.46 \pm 1.378$)

Ethiopia is directly beneficial through Ethiopian athlete's reward ($= M \pm SD = 4.37 \pm 0.869$)

NB. This test result $if\ X^2$ >H, there is no significant difference in accepting the null hypothesis.

If $if\ X^2 \leq$ H there is a significant difference and rejecting the null hypothesis and using an alternative hypothesis

X^2 is critical table value, and H is the Chi-Square result of the Kruskal-Wallis test

8.4.3. TEST STATISTICS 1

	A	B	C	D	E	F	G
Chi-Square	3.326	.090	.941	.326	1.457	3.804	8.041
Df	1	1	1	1	1	1	1
Asymp. Sig.	.068	.764	.332	.568	.227	.051	.005

Table 28: *Test Statistics 2*

A. The Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.068, the H value is 3.326, and the table value of, X^2 is 3.8415. This remark refers to Ethiopian long and middle-distance runners' participation in several investment sectors. Based on this finding, H

is less than X^2 by H=3.8415>3.326. Based on this finding, H = 3.8415> 3.326, which is smaller than X^2. Because the test result supported accepting the null hypothesis that Ethiopian long and middle-distance runners participated in various investment sectors of the Ethiopian economy, the claim mentioned above is accepted as true.

B. The Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.764, the H value is 0.090, and the table value of, X^2 is 3.8415 shows that the ELMD runners' beginning capital source is related to their LMD running sports involvement. Based on this finding, H> X^2 =3.8415>0.090 H is less than that of X^2. The hypothesis mentioned above is accepted as true because the test results support the null hypothesis that Ethiopian long and medium-distance runners' engagement in long and middle-distance running sports is related to the origin of their initial funds for investments and business ventures.

C. Athletics sport has significant economic change on Ethiopian athletes' life and their families related statement the Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.332 the H value is 0.941 and the table value of X^2 is 3.8415. Based on this finding, H> X^2 =3.8415>0.941 H is less than that of X^2. The hypothesis mentioned above is accepted as true because the test results support the null hypothesis that athletics sport has significant economic change on Ethiopian athletes' life and their families.

D. Long and middle-distance running` has significant economic change on Ethiopian economy-related statement the Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.568 the H value is 0.326 and the table value of X^2 is 3.8415. Based on this result, the H value greater than that of X^2 > H=3.8415> 0.326. Based on this finding H> X^2 =3.8415>0.326 H is less than that of X^2. The abovementioned hypothesis is accepted as true because the test results support the null hypothesis that long and middle-distance running` has a significant economic change in the Ethiopian economy.

E. Ethiopian long and middle-distance runners have significant economic change on Ethiopian economy-related statement the Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.227 the H value is 1.457 and the table value of X^2 is 3.8415. Based on this finding, H> X^2 =3.8415>1.457 H is less than that of X^2. The hypothesis mentioned above is accepted as true because the test results support the null hypothesis that Ethiopian

long and middle-distance runners have a significant economic change in the Ethiopian economy.

F. Ethiopian long and middle-distance running athletes support their country with foreign currency through their running rewards related statement the Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.051 the H value is 3.804 and the table value of X^2 is 3.8415. Based on this result, the H value is less than that of X^2 > H=3.8415> 3.804. The above statement is accepted because the test result supports the null hypothesis that ELMD running athletes support their country with foreign currency through their running rewards.

G. ELMD runners support their country through reward taxes. Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.005, the H value is 8.041 and the table value of X^2 is 3.8415. Based on this result, the H value greater than that of X^2, X^2< H =3.8415< 8.041. The above statement is acceptable to reject the null hypothesis related to Ethiopian long-distance running athletes' reward taxes to support their country and is designed to use the alternative hypothesis. The coaches, sports professionals, and athletes' responses were not similar regarding Ethiopian long and middle-distance athletes' reward taxes to support their country.

8.4.4. TEST STATISTICS 2

TEST	H	I	J	K	L	M
Chi-Square	4.137	.398	.620	1.543	.211	.037
Df	1	1	1	1	1	1
Asymp. Sig.	.042	.528	.431	.214	.646	.848

Table 29: *Test Statistics 2*

H. Ethiopian Athletics Federation and Sports Offices are beneficial with Ethiopian athletics sport. Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.042, the H value is 4.137, and the table value of X^2 is 3.8415. Based on this result, the H value greater than that of X^2 < H =3.8415 < 4.137. The above statement is acceptable to reject the null hypothesis because the test results support to reject of the null hypothesis to use the

alternative hypothesis that coaches, sports professionals, and athletes haven`t the same belief about Athletics Federation and Sports Offices beneficial with Ethiopian athletics sport.

I. Ethiopia's long and middle-distance running athletes' investment participation has contributed to Ethiopian economic growth-related Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.528. The H value is 0.398, and the table value of X^2 is 3.8415. Based on this result, the H value is less than that of X^2 > H=3.8415> 0.398. The above statement is accepted because the test result supports the null hypothesis that Ethiopia's long and middle-distance running athletes' investment participation has contributed to Ethiopian economic growth.

J. Ethiopian athletes have a significant change in their economic status, before and after athletics sport participation related statement the Wallis test with 1df (degree of freedom) and with 0.05 significance level 0.431 the H value is 0.620 and the table value of X^2 is 3.8415.

K. Based on this result, the H value is less than that of X^2 > H =3.8415> 0.620. The above statement is accepted because the test result supports the null hypothesis that Ethiopian athletes have a significant change in their economic status before and after athletics sport participation.

L. Ethiopian athletes' have a significant contribution to decreasing the unemployment rate in Ethiopia; related statement the Wallis test with 1df (degree of freedom) and with 0.05 significance level 0.214 the H value is 1.543 and the table value of X^2 is 3.8415. Based on this result, the H value greater than that of X^2 > H=3.8415> 1.543. The above statement is accepted because the test result supports the null hypothesis that Ethiopian athletes' significantly contribute to decreasing the unemployment rate in Ethiopia.

M. Ethiopian athletes have investment encouragement from the government-related statement the Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.646; the H value is 0.211, and the table value of X^2 is 3.8415. Based on this result, the H value is less than that of X^2 > H=3.8415> 0.211. The above statement is accepted because the test result supports the null hypothesis that Ethiopian athletes significantly contribute to decreasing the Ethiopian economy's unemployment rate.

N. Ethiopia is directly beneficial through Ethiopian athlete's reward-related statement the Wallis test with 1df (degree of freedom) and with 0.05 significance level = 0.848; the H value is 0.037, and the table value of X^2 is 3.8415. Based on this result, the H value is less than that of X^2 > H=3.8415>

0.037. The above statement is accepted because the test result supports the null hypothesis that Ethiopian athletes significantly contribute to decreasing the Ethiopian economy's unemployment rate.

NO	ATHLETE GROUP	SAMPLE	SAMPLE %	INVESTMENT TYPE	REGISTERED CAPITAL	EMPLOYEES NO.
1	Retired Athletes	5	10	Hotel and Tourism	30,327,000,000	
2	Ethiopian Born Athletes	4	8	Sport Tourism	2,300,000,000	
3	Active Elite Athletes	20	40	Real Estate Business	1,700,000,000	
4	Medium Leve Athletes	11	22	Import and Export	8,500,000,000	
5	Other Athletes	10	20	Agricultural	1,265,000,000	
6	Total	50	100	Building Construction	8,500,000,000	
				Share Company	1,414,500,000	
				Manufacturing	2,007,700,000	
				Other Business	1,533,000,000	
				Total	**57,547,200,000**	**8,359**

Table 30: *Sample Athletes` Investment Contribution*

8.5. QUALITATIVE DATA SUMMARY OF ATHLETES' CONTRIBUTION TO ECONOMIC GROWTH

The information in the above table was gathered through interviews and an observational checklist, and then it was arranged and analyzed to match the study's goals. The concerning sample and the related governmental offices were interviewed. These specific data samples were not significantly different from those mentioned above, although they did include some of the athletes' investments. Based on the table's findings, the athletes were divided into five distinct groups: retired athletes, athletes of Ethiopian descent (including Ethiopian athletes who have acquired citizenship in other nations), active athletes competing in long and middle-distance races, medium-level athletes who are not elite but have achieved success in international competition, and other athletes who have participated in various international and national competitions. A total of 50 athletes participated in investments across many investment sectors, with some participating in more than one investment sector while others did not.

The table's summary of the results shows that Ethiopian athletes have been involved in investments in real estate, sports and recreation, hotels and lodges, import and export commerce,

agriculture building construction, the manufacturing industry, stock firms, and other various businesses.

The samples mentioned above do not represent the entire athlete population; they are intended to demonstrate how much they contribute. Due to the fact that Ethiopian athletes' investment participation and contribution to the country's economic growth go beyond the scope of the research, their businesses and investments, as mentioned in the literature and supported by a photograph, are in vastly different fields. The researcher only looked at a small sample of sample athletes' contributions as a frame of reference. The sample, as mentioned above, of Ethiopian athletes made a total investment totaling 57,547,200,000 Ethiopian Birr, valued at $1,974,854,545.45 at the time. They also hired more than 8 359 current employees.

8.6. DISCUSSION

The great success of Ethiopian distance runners has been attributed to physiological and social reasons, some of which have been objectively evaluated in the laboratory and field but which have not been substantiated by data obtained through rigorous research methods. TOLA, (2018), Randall L. Wilber & Pitsiladis, (2012). This study's findings were combined using the study's data organization components. According to this study, participation in international athletic competition by Ethiopian athletes would have enhanced their economic performance. Ethiopian athletes who competed in various international long and middle-distance running competitions received rewards and improved their financial performance. The majority of Ethiopian athletes competing in international competitions had excellent athletic performances and would have received high level rankings before receiving rewards that affected their financial performance. Participation in international athletic competitions by athletes affected their status and financial situation. The contribution of Ethiopian athletes to economic growth is correlated with their involvement in international athletic competitions; as their involvement in these competitions increased, so did their contribution to Ethiopia's economic progress.

Before and after participating in athletics, Ethiopian athletes experienced a significant change in their financial situation. Ethiopian athletes also made a significant contribution to lowering the country's unemployment rate. The government also encouraged Ethiopian athletes to invest, which directly benefited Ethiopia.

8.7. CONCLUSIONS

8.7.1. INVESTMENT PARTICIPATION AND CONTRIBUTION

Ethiopia is the second-most populous African nation and boasts one of the world's fastest-growing economies. The government-owned a large number of the nation's economic assets. Additionally, several access points are opened to Ethiopians and foreign investors. Participation of Ethiopian middle and long-distance runners in various investment sectors and its economic impact The participation of Ethiopian athletes in various investment sectors and the allocation of Ethiopian athletes' capital to Ethiopian investment sectors did not show any discernible differences between the two groups of athletes and sports professionals.

Based on the observational checklist for this study and secondary data sources, Ethiopian athletes are involved in various investment sectors, including the hotel industry, sports tourism, hospitality, manufacturing industries, banking, and real estate, the agricultural sector, import and exporting, and banking. An example of their investment participation is in the car industry, coffee production, honey production and exporter, real estate, big African athletics village, schooling, International plc, and other businesses. One of the greatest Ethiopian runners had more than $ 1.5 billion in registered capital, invested in more than 11 hotels and lodges, and planned to build the 20 biggest hotels.

The data sources showed that most Ethiopian athletes' investment participation was restricted to hotels, apartment complexes, and houses. Ethiopian athletes are accustomed to building hotels in their home communities. This issue is supported by various studies that show that (Hoffmann et al., 2004) sport can play a significant role as a promoter of social integration and economic development in various geographical, cultural, and political circumstances. Ethiopian long and middle-distance running athletes' investment participation has contributed to Ethiopian economic growth.

Sport can encourage capital accumulation, facilitate the working of the market, and strengthen institutions through their effect on social capital, trust, culture, and crime (Jaitman & Scartascini, 2017). According to qualitative data gathered from investments made by Ethiopian athletes and other relevant governmental organizations, they have contributed more than $ 1.975 billion to various investment sectors. Ethiopian athletes invest, participate, and contribute relative to the

present GDP of Ethiopia, which is 2% direct investment. Result overview displayed: Athletes from Ethiopia have been involved in ventures in the hotel and lodge industry as well as in sport and recreation, real estate, import and export, agriculture, developing apartment complexes, the manufacturing industry, stock trading, and other businesses. The samples mentioned above do not represent the entire athlete population; they are intended to demonstrate how much they contribute.

Ethiopian athletes received investment contributions totaling 30,327,000,000 Eth birr from hotels and lodges, 2,300,000,000 Eth birr from sports and recreation, and 1,700,000,000 Eth birr from real estate companies. 8,500,000,000 Eth birr from the import-export sector, starting at 1,265,000 Eth birr. 8,500,000,000 Eth birr from buildings and apartments, 2,007,700,000 Eth birr from the share firm, 1,414,500,000 Eth birr from other businesses, 1,533,000,000 Eth birr, with a total of 57 547 200 000 Eth birr in registered capital, and the then equivalent exchange rate of $1 = 33 Eth birr, translating to $1,9743,854,545.45 in registered capital in USD. Since Ethiopian athletes invest a lot of money, the legal system of the government is not smart enough to display accurate data, and the majority of Ethiopian investors and people in business conceal their net investment capital related to taxation; this data was a quick indicator of the sample group contribution only and did not take the entire athlete population into account. Thanks to their investment, more than 8 359 people are currently employed by Ethiopian athletes. This significantly contributes to society by lowering the nation's unemployment rate.

8.7.2. THE SOURCE OF INITIAL CAPITAL

The study's findings showed that Ethiopian long and middle-distance runners' initial capital for investments and business ventures came from their participation in long and middle-distance running sports. The study also found that Ethiopian athletes have been involved in various investment sectors in Ethiopia, and their initial capital for investments comes from winning athletics competitions.

8.7.3. ATHLETES' AND FAMILIES ECONOMIC CHANGE

Families of Ethiopian athletes were the main beneficiaries of their efforts, and these families' lives were completely transformed thanks to the long- and middle-distance runners' prizes. The responses from the two respondent groups did not significantly differ in the statement that athletics changed Ethiopian athletes and their families' lives significantly. And these athletes

engaged in various forms of long and middle-distance running to improve their financial difficulties. This hypothesis is confirmed by other study findings highlighting Ethiopian athletes' drive for economic achievement (R L Wilber & Ptsiladis, 2012; de Lira et al., 2014b).

8.7.4. ETHIOPIAN ECONOMIC CHANGE

The statement that long- and middle-distance running has significantly changed Ethiopia's economy and that Ethiopian long- and middle-distance runners have significantly changed Ethiopia's economy was forwarded to the response group. The queries mentioned above are two distinct inquiries into long-distance running and the impact of Ethiopian athletes on the country's economy. The two respondent groups' attitudes on long and middle distance running and long and middle distance runner athletes did not differ statistically, and these results had a substantial economic impact on the Ethiopian economy. This indicates that Ethiopian athletes' running accomplishments at the world level result in victories, financial rewards, and participation in many investing fields. According to data gathered via observational checklists and secondary data sources, Ethiopian athletes have been involved in various economic activities, as seen in the above section, where they have contributed more than $ 1.975 billion in registered capital to the Ethiopian economy. Ethiopian athletes and Ethiopian athletes who travel abroad have significantly changed the country's economy.

8.7.5. REWARD TAXES AND SPORT OFFICES BENEFITS

More than 8359 employees were engaged in Ethiopian athletes' investment sectors, according to a sample result, and they paid taxes to the government and supported their families with athlete payments. Regarding how Ethiopian long and middle-distance runners support their country through reward taxes, significant differences were seen between the two respondent groups' responses. However, there was no information available regarding the country's system of reward taxation, and the respondent group was uncertain whether an athlete was paying tax on earnings or rewards from other nations. The Ethiopian Athletics Federation and Sports Offices, which are beneficial to Ethiopian athletics sport, showed considerable variations between the two categories, much as the reward tax. Even if a statistically significant difference was found between the groups, it was clear that athletics federation employees and sports federation employees were doing their jobs because of employment opportunities in this sport. Data gathered from secondary sources showed that the importance of athletics sports extended beyond the direct and indirect benefits to athletics sports employees to the entire nation.

9. CONCLUSION AND RECOMMENDATION

9.1. CONCLUSION

The study's findings demonstrated that when long and middle-distance runners' socioeconomic status rose, their performance fell, and their socioeconomic status climbed, resulting in a medium performance with an intermediate socioeconomic status.

According to the study's findings, no one had a high level of socioeconomic position; the athletes with the highest socioeconomic status belonged to the middle class, and nearly all of Ethiopia's athletes had socioeconomic backgrounds below the middle class. In Ethiopian middle and long-distance runners, a poor socioeconomic position has positively impacted their running abilities. According to the study's findings, 85.5% of the Ethiopian athletes who took part were top performers internationally and within their own country. They also participated in international long and middle-distance running competitions and won medals, including Olympic gold medals, despite coming from lower socioeconomic backgrounds than other participants. The analysis for this study came to the conclusion that the socioeconomic position and performance of Ethiopian long and middle-distance runners are inversely related.

Ethiopian middle and long-distance runners' performances and socioeconomic data were correlated, but the results showed an opposing link between the two variables. This indicates that when Ethiopian players' social status rises, their athletic performance falls. Conversely, as their socioeconomic status falls, so does their performance.

Ethiopian long and middle-distance runners encountered financial difficulties as they began their long-distance training. The study's findings showed that Ethiopian athletes' successes came from overcoming economic obstacles rather than just from training. The number of Ethiopian long and middle-distance runners enroll in official running training with low socioeconomic status is insignificant.

Middle and long-distance running has historically been successful in several parts of the world. Despite this, it is still unclear whether being an East African middle or long-distance runner has any genetic or physiological advantages. It is most probable that there are other factors contributing to their success (Randall L Wilber & Pitsiladis, 2015).

Based on these study results, Ethiopian long and middle distance runners' success is the result of several factors; including training altitude, the role models' influence, their motivation to overcome their financial difficulties (using sports as a means of eking out a living and achieving their financial goals), The birthplace altitudes of the present Ethiopian athletes range from 1500 meters to 4036 meters above sea level.

There was no significant difference between the two groups of respondents regarding the participation of Ethiopian long and middle-distance runners in various investment sectors of the Ethiopian economy, indicating that these athletes are investing their money in Ethiopian investment sectors. Based on the observational checklist for this study and secondary data sources, Ethiopian athletes are involved in various investment sectors, including the hotel industry, sports tourism, hospitality, manufacturing industries, banking, and real estate, the agricultural sector, import and exporting, and banking.

Ethiopian athletes' financial involvement and contribution as a percentage of Ethiopia's current GDP, which is 1.9 percent. The aforementioned samples do not represent the entire athlete population; rather, they are intended to demonstrate how much they contribute.

Ethiopian athletes invested 30,327,000,000 Eth birr in hotels and lodges, 2,300,000,000 Eth birr in sports and recreation, and 1,700,000,000 Eth birr in real estate. 8,500,000,000 Eth birr from the import-export sector, starting at 1,265,000 Eth birr. 8,500,000,000 Eth birr from buildings and apartments, 2,007,700,000 Eth birr from the share firm, 1,414,500,000 Eth birr from other businesses, 1,533,000,000 Eth birr, with total registered capital of 57 547 200 Eth birr and the comparable exchange rate at the time of 1$ = 33 Eth birr, calculated in USD as registered capital was $1,974,854,545.45.

The study finding suggested that Ethiopian long and middle-distance runners` investments and business activities' initial capital source is related to the rewards of their long-distance running sport participation. The primary beneficiaries of Ethiopian athletes were their families, whose lives were completely transformed as a result of the lifestyle and standard of living improvements brought about by long and middle-distance running. The two respondent groups' responses to the statement of Ethiopian athletes and their families' lives significant economical changed by athletics and that athletes' engagement in various forms of distance running to help

their financial difficulties did not significantly differ in their conclusions. This hypothesis is confirmed by other study findings highlighting Ethiopian athletes' drive for economic achievement (R L Wilber & Ptsiladis, 2012; de Lira et al., 2014b).

Ethiopian long and middle-distance runners' significant impact on the Ethiopian economy were found to be statistically insignificant. There was no significant difference in attitudes between the two study groups regarding the impact long-distance running's as well as long-distance running athletes have on Ethiopian economic growth. Ethiopian athletes have been involved in various economic activities, as shown in the above section, with registered athlete capital totaling more than $ 1.975 billion for the Ethiopian economy.

More than 8359 employees were engaged in Ethiopian athletes' investment sectors, according to a sample result, and they paid taxes to the government and supported their families with athlete payments. Related to Ethiopian long and middle-distance runners supporting their country through reward taxes responses of the two respondent groups significant difference was observed between the two groups in the reward tax.

9.2. RECOMMENDATION

Based on the study's findings and conclusions, the researcher recommended that Ethiopian athletes' socioeconomic status (SES) should be measured using the BG. Prasad's socioeconomic status measurement scale addresses performance level frame of reference issues. This measurement system was usable in both urban and rural areas of the nation, including Ethiopia. The study's findings showed that athletes with low socioeconomic status saw high running performance levels, while athletes with high socioeconomic status had low performance and participation in long and medium-distance running. Ethiopians can develop outstanding athletes with the least amount of sports project investment, which in and of itself is a valuable asset. High-level athletes from Ethiopia and around the world, including Olympic gold medalists, participated in this study, yet they all hailed from lower socioeconomic backgrounds. When they began long-distance training, ELMD runners had financial difficulties; they enroll in formal running training with a poor socioeconomic status. The study's findings showed that Ethiopian athletes' successes came from overcoming economic obstacles rather than just from training. The study found a negative correlation between Ethiopian athletes' socioeconomic status and performance. The findings of this study support the recommendation to the relevant body to use

the significance of the economic problem as a motivating element to achieve high levels of athletic performance and overcome the economic problems through success in running.

One of the goals of this study was to make recommendations based on the characteristics that contributed to Ethiopian athletes' success in long-distance competition. The important findings of this study's investigation led to the following recommendation. The study mentioned above factors is enhanced and excelled through scientific training. Still, training at high altitudes and motivation to overcome financial difficulties depends on the individual athletes' intrinsic and extrinsic motivation and their particular individual role models who solve financial difficulties by running, as well as their specific training and living area.

The discussion of this study's findings recommended to the responsible body take responsibility on; the athletes' output and determine the degree to which the athletes' motivation to complete their task, the influence of role models on their running performance, the importance of training with financial challenges to obtain good running results, and finally to consider the success of Ethiopian athletes is not dependent on a single factor but rather several psychological, physiological, environmental, and technical factors were revealed. Running over long and moderate distances requires a challenging and full mental and physical commitment, a strong work ethic, and physical and mental stamina. This sprinting ability requires overcoming obstacles in order to be achieved. Teams in sports medicine should consider the difficulties mentioned above while training. Amazing Ethiopian athletes' dominance in the world came about as a result of overcoming those mentioned above physical, psychological, environmental, and skill-related challenges, particularly the role model's impact on their performance. Ethiopian athletes' strong desire and motivation to succeed were the key ingredients in their success. Whoever needs it should follow Ethiopian athletes' lead.

According to this study's findings, the success of Ethiopian long- and middle-distance runners motivates the athletes to solve their financial issues and reach their financial objectives. The athletes' great desire was sparked by the example set by their long- and middle-distance running competition participation-solving role models.

The current study's findings and distribution of Ethiopian athletes, who represent more than eight regional states in Ethiopia, are shown in a table, with a graph showing elevations ranging from

1500 meters to 4036 meters above sea level for sample locations. According to the data from this study's findings, Ethiopian athletes did not all hail from the same region or altitude. Since 1960, Ethiopian athletes have won 58 medals at the Olympics, with 23 of those being gold, 12 silver, and 23 bronze. The altitude distribution for these Ethiopian athletes is not unusual for other nations in Africa or the rest of the world. All nations with locations close to the height as mentioned above have an identical likelihood of experiencing long and middle-distance running success.

Except for the Mexico Olympics, almost all Olympic competitions were conducted at low altitudes, between 11 and 520 meters above sea level. All of Ethiopia's Olympic medalists hail from high-altitude regions. Since all the competitions were held on low land, long-distance running was the only event in which they had a chance to prevail over other throwing and jumping competitions. This is because the low land areas present a greater challenge for throwing and jumping competitions involving the force of gravity. When the height is higher, the earth's gravitational pull is higher; when the altitude is lower, the pull of the earth's gravity is stronger. Based on this, athletes perform better while practicing for throwing and jumping events at low altitudes.

Ethiopia is considered the best country in the world for long and medium-distance racing, and the country's achievements thus far have been attributed to the athletes' efforts rather than to sophisticated training methods and infrastructure. This research work has assessed the present athletic performance of Ethiopian athletes to demonstrate that it is the athletes' effort, not the assistance of contemporary training and infrastructure. It is thought that the Ethiopian economy would have benefited more from athletic sports if it had been supported earlier by contemporary facilities and training and the current beginnings.

The study in the article Ethiopian athletes' success with altitudinal variations, athletes' distribution, and regional states' contributions to athletes' production-related research was conducted. There was a different assumption of the results of the previous study and the current Ethiopian elite athletes. The footsteps athletes' altitudinal distribution was diverse, their training infrastructure was so poor, and their training style was not sophisticated. However, they have lower elevations than Ethiopian athletes have in every competition area across the world, which allows them to live high and train low, which is a key factor in their success.

The training area and competitive area should be adjusted in light of this. All athletes have an equal chance of success in competition and training at high altitudes. Still, Ethiopian and East African athletes excelled there, such as at the 2240 meter above sea level Mexico Olympic Games, thanks to other variations of Ethiopian athletes related to socioeconomic status, motivation to solve their financial problems, and the influence of their role models. If Ethiopian athletics had previously benefited from contemporary instruction, the application of the scientific methodology, infrastructure, and the current beginnings were improved and applied, and it is thought that athletic sports would have better supported the Ethiopian economy and the running dominancy will be improved throughout the world competition.

Therefore, the organization that oversees international athletics should give the competition and training areas considerable thought. Based on this research's findings that almost all Ethiopian altitudes are suitable for producing long and middle-distance runners. The Ethiopian Athletics Federation and Sport Commission should consider their athletics training and project plans carefully. This is because the world's largest cities were constructed at lower altitudes than those listed in the table above. This has shown us that Ethiopian long-distance runners benefit from their living and growing environment.

Based on the findings of this study, the Ethiopian Athletics Federation and Sport Commission can disperse athletics projects throughout the nation to support citizen economic development and sports industry growth. The Ethiopian government could increase its economic growth if it put a lot of attention to the sport of athletics. Because long-distance running in Ethiopia does not require sophisticated resources, the success of Ethiopian long and middle-distance runners is an inspiration for the athletes to resolve their financial issues and accomplish their economic goals. The athletes' great desire was sparked by the example set by their long- and middle-distance running competition participation-solving role models.

Based on this study's findings about the geographic areas crucial for producing more athletes, the government needs to give athletics projects a lot more attention nationwide. The study suggests repeating similar studies, which are helpful to policymakers on the growth and development of sports tourism and sports recreation sector, which considered sports the backbone of Ethiopian economic growth, to carefully investigate the effects of long and middle-distance running sports contributions on Ethiopian economic growth. Finally, the research urged decision-makers to

focus more on the industry as a component of development than on recreation.

Sports has recently played a vital role in promoting social integration and economic development in many geographical, cultural, and political contexts. The government needs to pay much more attention to sport as a method of growth and support athletes who want to participate in various investment sectors because it has increased capital accumulation, facilitated market operation, and strengthened institutions. The government should have provided consulting services to advise athletes' investors on how and which investment sectors are significant to them.

While political leaders and governments in other nations view sport as the essence of success and a statement of their economic and political ambitions, sports have not been prioritized in Ethiopia. The expansion of sports tourism in Ethiopia has a real impact on the country's economic growth. If the government's efforts to promote sports tourism were to be improved, so would Ethiopian athletes' participation in various sports tourism and investment sectors, which would have resulted in greater contributions to Ethiopia's economic growth.

BIBLIOGRAPHY

Bhatt, A., & Waghmode, P. A. (2018). *ABSTRACT :2331*(48514), 5–7.

de Lira, C. A. B., Vancini, R., Fachina, R., Montagner, P., Pesquero, J., Andrade, M., & Borin, J. (2014a). Genetic aspects of athletic performance: the African runners' phenomenon. *Open Access Journal of Sports Medicine*, 123. https://doi.org/10.2147/oajsm.s61361

de Lira, C. A. B., Vancini, R., Fachina, R., Montagner, P., Pesquero, J., Andrade, M., & Borin, J. (2014b). Genetic aspects of athletic performance: the African runners phenomenon. *Open Access Journal of Sports Medicine*, *4*(1), 123. https://doi.org/10.2147/oajsm.s61361

Debnath, D. J., & Kakkar, R. (2020). Modified bg prasad socio-economic classification, updated – 2020. *Indian Journal of Community Health*, *32*(1), 124–125. https://doi.org/10.47203/ijch.2020.v32i01.024

Eime, R. M., Charity, M. J., Harvey, J. T., & Payne, W. R. (2015). Participation in sport and physical activity: Associations with socio-economic status and geographical remoteness Health behavior, health promotion and society. *BMC Public Health*, *15*(1), 1–12. https://doi.org/10.1186/s12889-015-1796-0

Elmagd, M. A., Al, O., Assistant, J., Mossa, A. H., Mohammed, C., Elmagd, A., Sami, M., El-Marsafawy, S., & Jadaan, O. Al. (2016). The effect of socio-economic status on the effective students' participation in physical activity: A cross sectional study from Ras Alkhaimah Medical and Health Sciences University-UAE. *International Journal of Physical Education, Sports and Health IJPESH*, *369*(32), 151–155. www.kheljournal.com

Farid, A. B. (2017). *Socio-Economic status difference between football and cricket players of Punjab*. *4*(4), 211–213.

Hamilton, B. (2000). *East African running dominance : what is behind it ?* 391–394.

Harrison, L., Azzarito, L., & Burden, J. (2004). Perceptions of athletic superiority: A view from the other side. *Race Ethnicity and Education*, *7*(2), 149–166. https://doi.org/10.1080/1361332042000234277

Hoffmann, R., Ging, L. C., & Ramasamy, B. (2004). Olympic Success and ASEAN Countries: Economic Analysis and Policy Implications. *Journal of Sports Economics*, *5*(3), 262–276. https://doi.org/10.1177/1527002503261826

Jaitman, L., & Scartascini, C. (2017). Sports for Development. In *Sports for Development*. https://doi.org/10.18235/0000962

Konnur, R. G., & Hoovanna, S. (2017). *Influence of socio-economic status on mental health of sports women*. *2*(6), 111–113.

Onywera, V. O., Scott, R. A., Boit, M. K., & Pitsiladis, Y. P. (2006). Demographic characteristics of elite Kenyan endurance runners. *Journal of Sports Sciences*, *24*(4), 415–422. https://doi.org/10.1080/02640410500189033

R kour Dr.surjit singh. (2014). Socio-Economic Status of Cricket and Hockey Players of Jammu & Kashmir. *International Journal of Behavioral Social and Movement Sciences*, *03*(02), 120–125.

Revelle, W., & Michaels, E. J. (1976). The theory of achievement motivation revisited: The implications of inertial tendencies. *Psychological Review*, *83*(5), 394–404. https://doi.org/10.1037/0033-295X.83.5.394

Reviews. (2017). *12*(18).

Scott, R. A., Georgiades, E., Wilson, R. H., Goodwin, W. H., Wolde, B., & Pitsiladis, Y. P. (2003). Demographic characteristics of elite Ethiopian endurance runners. *Medicine and Science in Sports and Exercise*, *35*(10), 1727–1732. https://doi.org/10.1249/01.MSS.0000089335.85254.89

Sharma, R. (2015). Effect of socioeconomic status on sport performance of national level junior weightlifters. *International Journal of Applied Research*, *1*(5), 212–214.

Singh, J. (2017). *Socioeconomic Status Effect on Sport Performance of Non Achiever and Achiever Shooters* .*7*(3), 59–65.

TOLA, Z. B. (2018). *Long Distance Running in Ethiopian Athletes: a Search for Optimal Altitude Training.August*, 78–118.

Wilber, R. L., & Ptsiladis, Y. P. (2012). Kenyan and ethipian distance runners: why are they so good? *International Journal of Sports Physiology and Performance*, *2012*(7), 11.

Wishnizer, R. R., Inbar, O., Klinman, E., & Fink, G. (2013). Physiological Differences between Ethiopian and Caucasian Distance Runners and Their Effects on 10 km Running Performance. *Advances in Physical Education*, *03*(03), 136–144. https://doi.org/10.4236/ape.2013.33023